

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 218.—Vol. IX.]

LONDON: SATURDAY, OCTOBER 26, 1839.

[PRICE 6D.]

PUBLIC COMPANIES.

MEETINGS.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this Association will be held, in conformity with the Deed of Settlement, at the office of the company, 26, Austin-friars, on Tuesday, the 29th day of October inst., at Twelve o'clock precisely. On that day two directors, namely, Robert Passenger, Esq., and George Probyn, Esq., and one auditor, Alexander Bruce, Esq., will go out of office, agreeably to the Deed of Settlement, but are immediately re-eligible, and are candidates for re-election.

It is necessary that parties intending to offer themselves as candidates for the direction and audit should leave notice of such their intention with the Secretary, at the office of the company, 26, Austin-friars, at least fourteen clear days before the day of election.

26, Austin-friars, October 8.

WILLIAM LECKIE, Secretary.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the proprietors of this Association will be held at the office of the company, 26, Austin-friars, on Tuesday, the 29th day of October inst., at half past Twelve o'clock precisely, for the purpose of considering the propriety of confirming the following resolution, which was passed at a Special General Meeting of proprietors, held on the 20th day of April last:—"That all the clauses in the Deed of Settlement, fixing the Half-yearly General Meetings in each year on the last Tuesday in April and the last Tuesday in October, be rescinded, and that in lieu thereof, from and after the next Half-yearly General Meeting, in the month of October next, such Half-yearly General Meetings in each year shall be held on such days in the months of January and July as the directors may appoint; and that after the election or re-election of directors and auditors, on going out of office by rotation, at the Half-yearly General Meeting in October next, the directors and auditors in future shall go out of office, be elected or re-elected, at the Half-yearly General Meeting in January, 1841, and so continue to go out of office, or be elected or re-elected, at every subsequent Half-yearly General Meeting in the month of January in each year, in lieu of the month of October."

26, Austin-friars, October 8.

WILLIAM LECKIE, Secretary.

IMPERIAL BRAZILIAN MINING ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the proprietors of this Association will be held at the London Tavern, on Thursday, the 14th day of November next, when the directors will fix a DIVIDEND out of the profits of the Association for the confirmation of the proprietors, agreeably to the 42nd clause of the Deed of Settlement, and to the bye-law passed at the Special General Meeting of the 6th February, 1828. The chair will be taken at Two o'clock precisely.

Winchester-house, Broad-street, Oct. 21.

GEORGE THOMAS, Secretary.

PRESTON AND WYRE RAILWAY, HARBOUR, AND DOCK COMPANY.—Incorporated by Act of Parliament.—The directors of the Preston and Wyre Railway, Harbour, and Dock Company, hereby give notice that, in compliance with the provisions of their Act, the HALF-YEARLY MEETING of the proprietors of the said Company will be held at the Company's Office, 11, King William-street, in the city of London, on Thursday, the 31st October inst., at One o'clock, but the same will be then adjourned for the consideration of special matters to a future day, of which due notice will be given.

(By order.)

JOHN POWER, Secretary.

CALLS.

BRISTOL AND EXETER RAILWAY.—CALL OF TEN POUNDS PER SHARE being the eighth instalment, and making with former calls the sum of £44 per share.—The directors of this company, under the provisions of the Act of Incorporation, hereby give notice, that the proprietors of shares are requested to pay, on or before the 6th day of November next, at any of the undermentioned banks, the sum of £10 on each of their respective shares.

London.—Messrs. Glyn, Halifax, Mills, and Co.

Liverpool.—The Bank of Liverpool.

Manchester.—The South Lancashire Bank.

Bristol.—Messrs. Miles, Harford, and Co.; Messrs. Baillie, Ames, and Co.; Messrs. Stuckey and Co.'s Banking Company, or at either of their branches; the West of England and South Wales District Bank, or at either of its branches; the National Provincial Bank of England.

Exeter.—Messrs. Sanders, Sons, and Co.; Messrs. Cole, Holroyd, and Co.; the Devon and Cornwall Banking Company; Messrs. Milford and Co.; the West of England and South Wales District Bank, or either of its branches.

Who have been instructed to charge interest at the rate of 5 per cent. per annum on all payments made after the 6th day of November next.

By order of the Board of Directors, J. B. BADHAM, Sec.

Office, 30, Broad-street, Bristol, Oct. 11.

Interest at the rate of 5 per cent. per annum will be allowed on payments in anticipation of calls.

DIVIDENDS.

HOLMBUSH MINING COMPANY.—The directors hereby give notice, that a DIVIDEND of ONE POUND per share will be paid at the office of the company, on Thursday, the 31st instant, and the following Thursdays, between the hours of Twelve and Three o'clock. Scrip certificates to be left on the previous Tuesdays.

New Broad-street, October 4.

TO THE MINING INTEREST.—The following RESOLUTIONS having been agreed to by numerous friends and supporters of the "MINING JOURNAL," are submitted to the mining community at large, with the view of extending the objects beyond the limits of a private subscription:—

Resolved,—That the "MINING JOURNAL" being devoted to the advocacy and advancement of the mining interests, and to the dissemination of knowledge connected with the several branches of science appertaining to the working of mines, as also recording the operations and proceedings of public companies generally, is a publication highly deserving the support and encouragement of the public.

Resolved,—That the thanks of the mining community, and all those embarked in legitimate mining pursuits, are eminently due to Mr. EXETER, for the spirit and enterprise manifested by him during the past four years in the establishment and carrying on of that publication, as affording protection to the interest of the miner and mine adventurer.

Resolved,—That Mr. EXETER, in the exposition of abuses, and more particularly in the late action brought by Mr. W. M. THOMAS (in which the plaintiff obtained one farthing damages), having submitted himself to proceedings at law, which have been attended with heavy expenses, however favourable may have been the issue, it is proper that he should be held harmless from any pecuniary loss arising from the conscientious performance of his duties, and from which the mining interest has derived so much benefit.

Resolved,—That, with the view of effecting this object, a subscription be immediately opened; and that communications be entered into with parties interested in mining pursuits generally, requesting their co-operation.

Resolved,—That the names of subscribers be requested to be transmitted to the office of Messrs. ASTON and WALLIS, 2, New Broad-street, City; and that a meeting be held on an early day, for determining what sum out of the amount so subscribed shall be appropriated to the purpose of presenting to Mr. EXETER a lasting testimony of the approbation of the subscribers, of the line of conduct which he has uniformly pursued in conducting the "MINING JOURNAL."

Resolved,—That notices of such meeting be transmitted to every subscriber at least ten days before holding the same; and that, in the interim, lists be published of the subscriptions received.—London, September 4, 1839.

The subscribers already advertised amount to £262 2s. 6d. The additional list will be published next week.

THE PATENT SAFETY FUSE.—FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonies to its usefulness with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c. &c.:

"I am very glad to hear that your recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

THE THAMES TUNNEL IS OPEN TO THE PUBLIC every day (except Sunday), from Nine in the morning until dark. Admit tance One Shilling each. Entrance near the Church at Rotherhithe, on the Surrey side of the River. The Tunnel is brilliantly lighted with Gas, and is now completed to thirty feet beyond low water mark on the Middlesex shore.

By order, J. CHARLIER, Clerk to the Company.

Thames Tunnel Office, Walbrook-buildings, Walbrook, October.

N.B. Conveyances to the Thames Tunnel, by Omnibus, from Piccadilly, Chancery-lane, Fleet-street, and Gracechurch-street; also by Steam-boats, at Chelsea, Vauxhall, Westminster, Hungerford, Greenwich, Dyer's-bell-wharf and London-bridge.—Books with plates descriptive of the works are sold at the tunnel, price one shilling.

MINE MATERIALS FOR SALE.—To be SOLD by PRIVATE CONTRACT, the whole of the MATERIALS now standing on BINDER DOWNS and WHEEL TREASURY MINES, consisting of one STEAM-ENGINE, 64-inch cylinder, stroke 9 feet 4 inches, by 7 feet 9 inches, with 20 tons of boilers, balance bon, &c., complete.

1 64-inch ditto, with 18 tons of boilers, stroke 9 feet 8 inches by 8 feet, balance bon, &c., attached.

1 42-inch ditto, with 8 tons of boiler, stroke 9 feet by 7 1/2.

1 24-inch ditto, with 7 tons of boiler, 5 feet 3 inches, equal beam.

1 19-inch single-acting STEAM-WHIM, 4 1/2 feet stroke.

1 20-inch ditto ditto ditto 4 feet stroke.

1 25-inch ditto brass cylinder, 4 feet ditto.

1 water-wheel 22 feet diameter, 24 breast, with a crusher attached, recently erected.

1 ditto 20 feet diameter, 2 feet 3 inches breast, with apparatus connected for the use of the smelt's shop.

1 12-inch capstan rope, 130 fathoms long.

1 14-inch ditto 120 ditto, with capstans, catheads, and shears, suitable for the different engines.

Sixty-two fathoms of 15-inch Pumps, seventy fathoms of 14-inch ditto, twenty-four fathoms of 19-inch ditto, thirty-five fathoms of 13-inch ditto, thirty fathoms of 11-inch ditto, twenty-five fathoms of 10-inch ditto, twenty-one fathoms of 9-inch ditto, twenty fathoms of 8-inch ditto, thirty fathoms of 7-inch ditto, fifteen fathoms of 6-inch ditto, one 18-inch Kneepiece, one 16-inch ditto, one 18-inch H piece, one 15-inch ditto, one 14-inch Kneepiece, one 13-inch ditto, one 12-inch ditto, two 10-inch ditto, three 9-inch ditto, two 8-inch ditto, one 7-inch ditto, one 6-inch ditto, twelve Plunger poles, varying in size from 16-inch to 8-inch diameter, with stuffing-boxes and glands to fit; about seventy fathoms of 13-inch Connecting Rods, with rods, plates, &c., to fit, three Horse-whims, about two miles of Railroad, chiefly 2-inch by 2-inch, with the wagons, two Flat-rod King Post Bobs, nearly new, adapted for a long stroke, six Draught Horses, two Wagons, one Timber Carriage and three carts, together with a variety of other articles too numerous to particularise.

For further information apply to Captain Gregor, Praze, near Camborne; and, to treat for the purchase, to Agents on the mine.

Dated Binner Downs, Oct. 2.

TO BE SOLD BY PRIVATE CONTRACT, all that Valuable

MINE, called PARBOLA, situated in the Parish of Gwincar, with the Mate-

rial thereon, consisting of a 38-inch CYLINDER ENGINE, iron beam and boiler,

26 feet long, Capstan and Shears, and Capstan rope; 30 fathoms of 11-inch Pumps

with 2 H-pieces and Drive pieces, to suit; two 11-inch Plunger poles with cases,

stuffing boxes, and glands, complete; 8 fathom 9-inch Pumps; 30 fathoms 7-inch

Wood rods, with plates, bolts, and bars; two Stamping-mills, one 18 and one 20-

feet diameter; 170 fathoms 14-inch Launder, Buddies, Frames, Kieves, &c., &c.,

three Horse-whims with Chains, Kibbles, and all other conveniences for prosecu-

ting the said Mine; the above materials are nearly new.

For a view of the same, apply to the agent on the Mine; and for price and fur-

ther particulars, to Mr. C. H. Richards.

Marazion, October 22.

NEAR BEDDLEGETT AND THE CELEBRATED PASS OF ABERGLASSY.

VALUABLE AND EXTENSIVE FREEHOLD ESTATES, possessing RICH COPPER

MINES AND VEINS OF SLATE, between Carnarvon, Capel-Cerig, and Port-

madoc, with a good sporting domain; the two estates comprising ABOVE ONE

THOUSAND THREE HUNDRED ACRES, with a beautiful river and lakes,

abounding with salmon and trout, amidst some of the most sublime and romantic

scenery of NORTH WALES.

MESSRS. DANIEL SMITH AND SON are instructed by the

proprietor to offer for SALE BY AUCTION, at the Mart, near the Bank of

England, on TUESDAY, October 29th, 1839, at Twelve o'clock, the valuable estates

of SYGAN-FAUR and HAFODYDD-BRITHION, in the counties of Merioneth and

Carnarvon, in the romantic vale of BEDDLEGETT. The first offering to capitalists,

and the mining interests in particular, an important property. THE COPPER MINE

from which ONE OF THE VALUE OF SEVERAL THOUSAND POUNDS has been

raised, being now in hand, with the powerful water-wheels and other machinery;

also, a most attractive landed investment, comprising ABOUT THREE HUNDRED

AND FIFTY ACRES, with several fine sites, for the erection of a mansion or villa,

bounded by the beautiful windings of the Aberglassyn River, and extending to

Dina's Lake, in the midst of splendid mountain scenery, embracing Snowden, and

within half a mile of the village and inn of Beddgelert, on the turnpike-road to

Capel Cerig.

The other estate of HAFODYDD-BRITHION (about two miles distant) offers a

fine and very improvable investment, comprising ABOUT ONE THOUSAND

AND TWENTY TWO ACRES, in a perfect ring fence, with a beautiful lake and

other waters, abounding with fish and wild fowl, and the domain with a variety of

game, grouse, &c. On this estate FINE VEINS OF SLATE HAVE BEEN

OPENED, and lie well for being easily worked. The produce of the mines is now

conveyed along the turnpike-road to Portmadoc (about eight miles), but it is ex-

pected that a railroad will be shortly formed to the shipping place by the owners of

adjoining mines.

Mr. Roberts, of Beddgelert, will show the estates, and descriptive particulars,

with plans, may be had at Beddgelert; at the chief towns at Bangor, Liverpool, and

Birmingham; of Messrs. Williams and Hesse, Fwihell, and Portmadoc; the ven-

dor's solicitors, of Mr. R. L. Ellis, surveyor, Carnarvon; at the Auction Mart, and

at Messrs. Smith's offices, Waterloo-place, Pall Mall, London; and Windsor, Berks.

TO BE SOLD, by private contract, one 63-inch Cylinder EN-

GINE, with Iron Beam and Condensing Work complete, and one or two

Boilers. One 45 inch Cylinder ENGINE, from beam and Condensing Work, with-

out Boiler. One 21-inch Cylinder Engine, without Boiler. A large quantity of

Pumps, Working Barrels, H and Clock-seat Pieces, Windbores, and a great variety

of other Mining Materials.—Apply to Captain W. Richards, Great Wheel Fortune,

near Marazion.—Dated October 16.

SERK SILVER-LEAD AND COPPER MINES.—A FEW

SHARES in the above valuable mines may be obtained on application to Mr.

Thomas Boxer, 46, Louthbury, where specimens of the ore may be seen, and all

necessary information obtained.

N.B.—Capitalists will find the above mines well worthy of their attention.

TEMPLE COPPER MILLS, Berks.—TO LET ON LEASE,

from Lady-day next, the above EXTENSIVE MANUFACTURING PRE-

MISES, water power, with right of nine thoroughs, situated on the River Thames,

thirty miles from London, and five miles from the Great Western Railway Station.

For further particulars, apply to Messrs. Bloxam and Ellison, solicitors, Lincoln's

Inn-fields, London.

18, Trafalgar-chambers, South John-street,

Liverpool, 19th October, 1839.

JOSEPH JOHNSON has the pleasure to inform his friends

that, in partnership with DUNCAN LITTLEJOHN, he has commenced busi-

ness in the IRON, STEEL, AND METAL TRADES, under the firm of Johnson and

Littlejohn.

They have arranged with the well-established and highly respectable house of

Peter Stubs, Esq., Warrington, for the sale of his very superior steel files and tools,

and with another most respectable house in Sheffield for a variety of qualities of

similar articles.

By attention, industry, and perseverance, they hope to obtain and secure a fair

share of support, respectfully soliciting which, they remain,

Your obedient servants,

JOHNSON AND LITTLEJOHN.

TALACRE COAL AND IRON COMPANY.—TALACRE

STONE.—Just arrived (FOR SALE) by the ship Carabine, from the extensive

Quarries at Talacre, North Wales, a cargo of this SUPERIOR STONE, so much

admired by eminent Architects and Builders who know its excellent quality.

May be seen at Mr. Robert Adams', Old Barge House Wharf, Upper Ground-

street, near Blackfriars-bridge.

73, Gracechurch-street, Oct. 23.

W. WESTON, Junr., Secretary.

BLUNDELL'S PATENT PALM-WAX CANDLES, 14s. per

dozen pounds, are superior in illuminating power and equal in durability

to spermaceti or bees'-wax candles; they do not require snuffing, and, from their

cleanness and firmness, are admirably adapted for burning in crowded apartments,

and for exportation to hot climates. Sold (wholesale) by Blundell, Spence, and Co.,

3, Queen-street, Cheap-side, London; and (retail) by most respectable dealers in

town and country.—A liberal discount to the trade.

BY THE QUEEN'S PATENT.

To Engineers, Railway Directors, Steam-boat Proprietors, Manufacturers, and

others requiring Steam Power.

MESSRS. BUNNETT and CORPE respectfully solicit atten-

tion to their new PATENT CONCENTRIC STEAM-ENGINE, which, by its

novel formation and arrangements, combine compactness of form, increase of

power, speed, and economy in working, to an extent hitherto unattainable. De-

scriptive plans and particulars, also cards to view the Engine in operation at their

ENGINE and PATENT REVOLVING IRON SHUTTER WORKS, Deptford, may be

obtained at their office, No. 29, Lombard-street, London.

Where also may be seen, specimens of Fairbank's Patent Platform WEIGHING

MACHINES and WEIGH-BRIDGES, for which they are appointed sole agents for

London and its vicinity.

TO THE HIGH SHERIFF OF THE COUNTY OF CORNWALL.

WE, the undersigned FREEHOLDERS, INHABITANTS,
and others interested in the county of Cornwall, hereby request you to
CONVENE a COUNTY MEETING, for taking into consideration the expediency
of applying to Parliament for the purpose of obtaining a RAILWAY THROUGH
THE COUNTY, and for considering the measures proper to be taken for that ob-
ject.—Falmouth, October 9.

JOHN ELLIS, Mayor of Falmouth, Chairman.

Lord Falmouth, Lord Roscowen Rose, Thomas P. Dixon, Joseph Sambell, Henry Bradfield, John Hockley, William Treblecock, James R. Cassell, L. S. Boyne, W. H. Crowe, Thomas Oliver, jun., Richard Richards, W. J. Clarke, G. J. Nash, John Gill, Stephen Wilcock, James Mead, John P. Dunning, John Triggs, R. W. Fox, William M'Dowell, E. Gilbert, Nicholas Pollard, Nicholas Treddler, Thomas Rogers, Stephen Whettem, Thomas Rogers, jun., Mark S. Bassett, F. S. Pawan, Thomas Bennett, Reginald Julian, W. H. Heale, T. H. Earle, Colin Sanders, J. Hodge, Mayor of Truro, W. P. Kempe, G. Whitman, Thomas Hocker, Clement Carlson, W. M. Twesdy, Robert Michell, James Farquharson, G. A. Knight, William Vice, John Baynard, Francis Hingston, John Tippet, E. S. Spry, Thomas Treloar, H. Williams, O. Williams, John Ferris, W. H. Bullmore, Francis Passingham, W. T. Chappel, Joseph Ferris, J. S. Stanmore, John Cooke, Mayor of Launceston, John H. Hilday, Thomas John Phillips, John K. Lethbridge, Francis Rodd, Thomas Pearce, A. H. P. Lawrence, Charles Gurney, Henry Petrick, T. H. Tilly.

In compliance with the above requisition, I appoint TUESDAY, the 29th instant,

for holding a COUNTY MEETING, at the Shire Hall, Bomin, at Twelve o'clock.

Colquhoun, October 16.

D. PETER HOLLYN, Sheriff.

COLLEGE FOR CIVIL ENGINEERS.

PRESIDENT—His Grace the Duke of Buccleuch, K.G., F.R.S.

COUNCIL OF ADMINISTRATION.

CHAIRMAN.

His Grace the Duke of Richmond, V.P.

The Marquis of Tweeddale, V.P.

DEPUTY-CHAIRMAN.

The Right Hon. the Earl of Devon, V.P.

Berkley Westropp, Esq.

BANKERS.

Messrs. Snow, Strahan, Paul, and Co.; Messrs. Williams, Doonan, Labourers,

217, Strand, and Co., 20, Birch-lane.

SOLICITORS.—Messrs. Bridges and Mason, 33, Red Lion-square.

SECRETARY.—Mr. J. E. B. Curtis.

Notice is hereby given, that the prospectus is now ready for circulation, and the

office opened from Ten to Four o'clock daily for registration and general business.

By order of the Council, J. E. B. CURTIS, Secretary.

Prospectuses may be had at the office, where every information will be given; of

the solicitors, Messrs. Bridges and Mason, 33, Red Lion-square; of Mr. West

architectural library, 59, High Holborn; of Mr. Setchell, bookseller, 23, King-street,

Covent garden; and at 24, Cornhill, City.

RAILWAY INTELLIGENCE.

LONDON AND BIRMINGHAM RAILWAY.—The whole of the repairs of the permanent way, &c., throughout from London to Rugby (eighty miles) have been contracted for, for a period of seven years, by Mr. Jackson, who was formerly a heavy contractor on that line during its formation.

RAILWAY FROM HAMPTON TO WARWICK AND LEAMINGTON.—A new line of railway, from the Hampton station to Warwick and Leamington, is being surveyed. From what we know of the country, we should think the levels good, and that it will have the advantage of interfering very little with the comforts and conveniences of private individuals. It appears to be one of the few lines which will, probably, be encouraged by the landed proprietors through whose estates it is intended to pass. A strong opposition to the line from Coventry to Leamington has already been manifested by Lord Leigh, Mr. Gregory, the Hon. Mr. Percy, and others.—*Birmingham Advertiser.*

RAILWAY FROM NEWCASTLE TO BLAYDON.—The railway from Newcastle to Blaydon, on the north side of the river, commencing from the station west of the Infirmary, and forming part of the Newcastle and Carlisle Railway, was opened yesterday. There was nothing remarkable transpired, except that several very elegant and commodious omnibuses were to be seen plying for the first time between the station and the different inns in the town. The change is an undoubted improvement upon the old plan of the passengers coming to Redheugh, and thence by steamboat to the Close.—*Tyne Mercury.*

ERECTION OF A TERMINUS AT THE GREENWICH RAILWAY.—On Monday last a number of workmen were actively engaged in excavating and marking out the ground opposite Queen Elizabeth's almshouses (belonging to the Drapers' Company), preparatory to the erection of a grand terminus at the Greenwich end of the railway.

RAILWAY COMMUNICATION BETWEEN ENGLAND AND SCOTLAND.—Mr. Hodgson Hinde has received a letter from Mr. Labouchere, President of the Board of Trade, intimating that "the Lords of the Treasury have been engaged in the selection of proper persons," to inquire into the best line of railway "between London and the cities of Edinburgh and Glasgow," and that "no long time will elapse before measures are taken to comply with the orders of the House of Commons."

OPENING OF THE RAILROAD FROM NAPLES TO CASTELLAMARE.

This railroad was opened on the 3d inst., by the King in person. Three marquis were set up at Villa Carriano, near the station at Portici, at which the King, on alighting with the royal family, was received by the Minister of the Interior, a commissioner appointed by the French shareholders of the company, a Neapolitan commissioner, and the chief engineer. The French commissioner, M. Dubois, made a suitable address to His Majesty, to which the king replied in the most gracious manner, taking occasion to say—"I experience great satisfaction at seeing Frenchmen uniting their interests with Neapolitans in this fine undertaking. This railroad will assuredly be of great benefit to commerce and industry. I have given my entire protection to this, the first essay of the kind in Italy, and, being convinced of its utility to my people, I contemplate, on the termination of your works as far as Nocera and Castellamare, a continuance of the communication by Avellino to the Adriatic." At a signal from the fort of Grenatello a train started from Naples for Portici, the waggon being filled with soldiers and sailors, waving flags, and bands of music playing national and popular airs. The religious part of the ceremony followed. Monsignore Giusti, in his pontifical robes, recited appropriate prayers, and pronounced his benediction on the undertaking. Another train, with the royal and court carriages, came up, and the king and the royal family, accompanied by the Minister of the Interior, the commissioners, and other authorities, proceeded in them to Portici, where His Majesty and the royal family, with the minister and commissioners alighted, the rest of the party remaining in the carriages. Having minutely examined the locomotive engines and other parts of the establishment, His Majesty and the court returned by the ordinary road to Naples. The railroad was in the afternoon given up to the public. The King has created M. Dubois, the French commissioner, and M. Bayard, the chief engineer, Knights of the Order of Merit of Francis I.—a distinction the more honourable, as there are only 100 members of the order.

ON RAILROADS—THEIR OBJECTS AND RESULTS.

Mr. W. Piesch, in his able article on the advancement of German industry, offers some observations on the subject of iron railroads. According to his statement, it appears that most of the English lines—excepting the Liverpool and Manchester, the London and Birmingham, and some two or three others—do not yield more than from 4 to 5 per cent. interest. As the remarks of Mr. P., notwithstanding their general soundness, might in some cases do prejudice to railroad speculative enterprise, we trust our submitting the subject to a closer examination will not be taken amiss.

At first, there should be established only an extensive system of railroads, to facilitate the commercial intercourse between the North Sea and the Mediterranean, between the Baltic and the North Sea, as also between those countries bordering upon the lines of these great roads, and the provinces in the vicinities of such rivers as the Scheldt, Rhine, Weser, Elbe, Oder, the Rhine, Danube, Black Sea, and Mediterranean. These German railroads are not to be reckoned as the means of internal communication alone, for the mere interior intercourse is sufficiently well performed by tram-ways for horse power, and good practicable common roads; the latter preferably, which may unite with the various termini of the grand steam trains. That these modes of internal communication are generally sufficient is proved in France, Belgium, Germany, and even in England itself.

The united railroads from the Loire, and the Mediterranean, *via* Paris, Belgium, through Prussia to the Baltic; from the Baltic *via* Berlin, through Austria towards the Black Sea and the Mediterranean; afterwards from Berlin through Austria *via* St. Petersburg, Moscow, to the Caspian Sea; and thence, perhaps, stretching themselves out to India, wherof the Berlin, Saxony, and the Rhine lines, may be regarded as the beginnings, cannot, consequently, be looked upon as the means of internal correspondence and communication alone. They will form so many new land streams of industry, practicable in all times and seasons, in storm or sunshine, in winter or summer; and the produce of commercial industry will go on to its destination, secure from the vicissitudes of the tempest, the obstacles of ice-bound rivers, or other changes of the unstable elements.

The crossing of these land streams of industry—the railroads, through the precincts of the great rivers, will give the historical events of our century such a significance and extent, as the German middle ages could not even have conceived the possibility of; because to them were unknown railroads, steam-engines, and the other mighty mechanical expedients of our times, to lighten labour, and to bring the ends of the earth into regular communication. Russia, with its Caspian Sea, its large rivers, forests, and plains of everlasting snow and ice, is, in respect to the western part of Europe, what Germany and the Baltic were, formerly to the Roman empire. The period, however, may not be very remote, when, united by canals, railroads, &c., in its interior relation with Asia, cultivating its immense resources, and emerging from the seclusion under which its commercial intercourse with Germany and the west of Europe has hitherto existed—Russia shall raise itself to a pitch of greatness, a height of commercial prosperity and wealth, unequalled in the annals of the world.

We have entered into this exposition in order to show that the railroads, which shall unite the east with the west, must, in time, become as important for Europe as are at present for America those uniting the Hudson and the St. Lawrence to the Mississippi; notwithstanding they are not yet in perfect conjunction. The statements that have been published as to the low rate of interest afforded by these speculations must be regarded as essentially premature; particularly as the Belgian or British railroads cannot form a rule for our reference, much less those of France. We must create a system for ourselves—a system that shall be applicable to our general intercourse, and that will stand in union with the manners and habits of the people.

There are two special reasons why the English railroads yield a profit only when they command an unprecedented traffic, by being the only best means of transport and intercourse when every one is, in fact, constrained to make use of them. The first ground is, the expensive method of construction, the great consumption, and often waste of materials and labour in tunnels, viaducts, bridges, and buildings; and further, the costly system employed in the general maintenance of their lines of road. The second, and most important reason of their not yielding a profitable return, is, in the high prices charged for goods and passengers; which prices, it seems, must be still increased, in consequence of the immense outlay in the construction, &c. These high charges must evidently originate in a false principle; as their reduction to a moderate scale would inevitably bring large quantities of merchandise, and a multitude of passengers, who, at present, prefer the navigation of seas, rivers, and canals, because they either cannot or will not pay the enormous charges of the steam-trains. The best English engineers—we mean those who have attained their object with the most limited means, have, in their depictions before Parliament, deplored the extravagant prices paid for railway work, and have instanced individuals who began to work upon the earlier railroads as simple daily labourers, but who, after a few years, became contractors for works, and left off as the possessors of tens of thousands. In consequence of the high prices of provision in England, the

daily wages are at least three times greater than in Germany, and the cheapest railroads in the former country cost double as much as the dearest ones do in the latter; therefore, for this one sufficient reason, we must not take the English railroads as patterns. Every one who will read the records of the transactions of Parliament on this subject, will there find our assertions fully corroborated.

The Belgian railroads have also not yet produced higher interest than from 4 to 5 per cent., excepting in the year 1836, when they paid 164 per cent.; the causes of this are to be found in several circumstances applicable to them, one or two of which circumstances may be regarded as peculiar:—

1st. Many of these railroads were projected and laid down at the same time; this occasioned an excessive outlay, for which, in some instances, there has been no return, as the roads have never been brought into operation.

2d. The prices of transport, in reference to the universal improvement of the country, were placed too low.

3d. Belgium in consequence of its relations with other countries, as for instance, Holland, is isolated.

4th. Its railroads have as yet been employed only as a means of internal communication; for not one of them has been permitted to extend beyond the frontiers of any of the neighbouring states.

Therefore, it can only be when all these at present isolated Belgian roads shall be brought into junction with the western and southern states of Germany, Switzerland, &c. (through the establishment of the line from Liege to the Prussian frontiers), and when all radii to the same have been opened, and their grand aim, the union of the Scheldt and Belgium, with the interior of Germany and France, shall have been accomplished—it is only then, we repeat, that their great importance can be justly appreciated, and their value as investments for capital fully known; and when this perfect plan has been worked out, then also will be seen, and universally acknowledged, the genius and enterprise of the talented projector.

The North American railroads would not have paid so well as they have done, nor their shares reached their present high value, if their construction had not been so many illustrations of the practically economical intelligence of this people, who judiciously confined themselves to the employment of such materials as were at hand, and which were cheaply available to the purposes required.

In several earlier numbers of our publication, we have referred to a new and practically simple method of constructing dams for causeways, which has in view the rapid completion and opening of extensive lines of road; the avoiding of frequent tunnelling; showing also the possibility of establishing trains over tracts of country, where, according to the old method, either in consequence of the length of time required for the completion, or the immense cost of the undertaking, they would be abandoned as impracticable; and more particularly have we pointed out the means of diminishing the excessive charges for keeping the roads, engines, &c., in working order. If these methods be pursued, our railroads will yield as high an interest as the American, or the best English and French, if not higher—always, of course, supposing that they shall, sooner or later, become sections of the great European-Asiatic system of steam trains, and not remain merely as media of internal communication.—*Inventors' Advocate.*

CHESTER RAILWAYS.

We have received a variety of communications relative to the recent amalgamation of the Chester and Crewe Company with the Grand Junction Company. The majority relate to the personal question between the directors and the proprietors. With that we have little or nothing to do, beyond the expression of our individual opinion that the former have made an advantageous bargain for the latter.

There is however a public question—not merely a Chester question, but a public question in a more extended sense of the phrase involved in this transaction, and on which the public, and particularly the citizens of Chester, are entitled to every information, as they have a right to have their interests fully considered and protected in any negotiations, inasmuch as the pretence for chartering railway companies, and entitling them to cut up the country, in as much and more for the public benefit and convenience as for individual benefit. It is an obligation on such companies to complete what they have undertaken, and as far as circumstances will permit, and they have the power, to realise to the public all the advantages they originally set forth. We have hitherto given an unflinching advocacy to the gentlemen composing the Chester and Crewe Railway directors, because we not only concurred in all their views, whether in respect to their own line, or in extending the railway system in connection with that line into the heart of England, into North Wales, &c., or making the Dee navigable for large vessels to come up to the Chester terminus of their line, but also because we felt they were entitled on public grounds to the fullest confidence. Notwithstanding what was alleged against them last week, by gentlemen having interests diametrically adverse to Chester, we felt they were incapable of sacrificing Chester, or leaving unfulfilled any public obligation to which they were either legally or morally bound. The result has fully justified the reliance of those of the proprietors who were not led away by the sophisms of Mr. Walmesley, and has extorted even from the dissentients the tardy tribute, that not only have the proprietors been rescued from a most embarrassing position, for which the directors were in no respect responsible, but that the interests of the line, of Chester, and of the districts with which it is in connection have been fully protected.

The main apprehensions expressed at the meeting were, that the line would not be adequately and efficiently worked, as if any company would permit a line worth 250,000*l.* to lie dead when it might be worked to a profit; and also that it might lead to Chester being deprived of the most direct means of railway communication with the metropolitan and manufacturing districts. We, at the same time, were aware that negotiations were going on, which, if completed, inevitably secure these advantages. The Chester and Crewe directors were, doubtless, also in possession of similar information, but of course they were not in a situation to use it in answer to what was advanced. We believe every thing is now irrevocably arranged, and on a basis highly beneficial to all parties, and certainly most beneficial to the interests of Chester. The Extension Company have arranged their differences with the Grand Junction Company. The line from Manchester will run into the Grand Junction line at Crewe, and diverge from it at, Chepstow to Rugby, where it will join the Birmingham and London. Manchester will thus enjoy a direct line to Birmingham, and also a direct line to London, avoiding Birmingham. Chester will enjoy a direct line to Manchester *via* Crewe and the Extension, and a direct line to London *via* Rugby, avoiding Birmingham, and shortening the distance and lessening the charge of carriage very considerably. The rate of passenger traffic will be 2*d.* per mile, and the facilities will be unimpeachable, as it will be compulsory that the two companies shall have liberty to use each other's line, so that passengers will neither have to wait at the stations or points of junction, nor to change carriages.

The arrangement is highly advantageous to our Birkenhead neighbours, therefore we apprehend their jealousy will now subside. It will bring an immense traffic on their line; and as the railway intercourse of the United Kingdom is hereafter to be conducted on the reciprocal principle of using each other's lines (for unless that arrangement is acted on, it will be compelled by legislative enactment), that company will have the advantage of running their passenger traffic on the united line in their own carriages, and also of having their line used by the carriages of the united company. With respect to the efficient working of the Chester and Crewe line, in connection with the Grand Junction, and all the lines with which that line is in connexion, we are in a condition to state, that the resolution of the Chester and Crewe proprietors has been fully adopted by the Grand Junction directors, so that on public grounds the Chester and Crewe proprietors and the citizens of Chester have every reason to be fully content. So far as cheap railway communication with the most important districts of England is attainable, we could not be better circumstanced, nor enjoy greater facilities.

When we alluded a few weeks since to this arrangement, we anticipated every thing that has taken place. We congratulate all parties concerned on its successful accomplishment. It is clearly the interest of all the contracting parties that other projects connected with the city of Chester should be persevered in. We allude specially to three, the Ruabon Railway, the improvement of the Dee, and the Great Anglo-Hibernian Railway *via* Holyhead.

The Ruabon Railway will bring most important districts both for passengers and productions into immediate connection with Chester, and the united lines of railway. The traffic in coals alone must be very considerable; and if as we are informed by scientific men of the first eminence, the Ruabon coal produces coke of the very first quality for locomotive engines, that is an additional reason for the making of this railway; inasmuch as the greatest difficulty this method of transit has to contend with, is the supply of fuel of an adequate quality, and we believe, that in the whole of the north-west district, there is only one solitary coal-field, and that of limited extent, from which coke of a proper quality can be obtained. The anticipation is, that the Ruabon coal-field is destined to supply coke for all the railways in the north-western and midland districts of England. The Ruabon Railway completed, and the Ruabon coal-field opened, the improvement of the river Dee becomes inevitable. The lukewarmness of one party, and the interested hostility of a second, may retard that great desideratum to the trade of Chester and the manufacturing and midland districts; but when that railway and the Pottery line, which the united company are bound to construct, are in active operation, then if Chester will not open the estuary of the Dee, so as to bring vessels of large burthen to the walls of the city, other parties will. At the same time it is humiliating to acknowledge, that whatever is projected to benefit Chester, does not receive adequate encouragement from her citizens, but on the contrary, the wait the tide of events, and endanger the palpable advantage which must necessarily result from prompt measures of support.—*Inventors' Advocate.*

"Sustentus expectat dum deficiat annus," at the
"Labbat et labatur in omne volubilis ævum."

These two projects ought actively to engage the attention of the citizens of Chester. They are now of pressing importance. That they are attainable, and at a remunerative cost, we have the sanction of the highest scientific authority—an authority, or rather authorities, we will undertake to say, not to be frittered down by the hypercriticism of any empiric, or the hostility of any adverse interests. With respect to the Great Holyhead Railway, we regard that as the next consequence of the present arrangement. But this is a question upon which we shall not now enter. Our present duty is again to press upon the citizens of Chester not to neglect the river improvement.—*Chester Chronicle.*

BANKING IN SCOTLAND.

The subject of Banking is now so generally interesting, and the opinions on the best mode of conducting these establishments are so conflicting, that the following article, which we copy from the *Times*, will probably be acceptable to our readers:—

It would appear from the printed report of certain preliminary proceedings in the Scotch courts, arising out of an action for damages, that the Scotch system of banking, about which so much has been written and boasted, is by no means that perfection of paper money wisdom which has been pretended, and not contradicted, so long. In the following statement of leading particulars in the case referred to, it must be understood that, the proceeding being *ex parte* and not yet terminated, no opinion can fairly be hazarded on its merits with reference to the special point at issue between the litigant parties; therefore, that facts only, with respect to conclusions, are here dealt with which seem mutually agreed upon, and that such other points as may be touched upon by way of rendering the whole more clear, must be accepted as the allegations of the complaining party alone, which may or may not be well founded, but to which it may be fairly presumed that a satisfactory justification will be set up by the respectable powerful defendant in bar.

The pleadings go to aver in substance, that Mr. David Sutherland, a merchant of Wick, where he had a commercial establishment, but since 1836 resident in Limerick, where he seems also to have carried on business, had an account with the branch of the Commercial Bank of Scotland in the former place, on the usual footing, as alleged in the *ex parte* pleadings, viz.—that "it was an understanding betwixt the said David and Josiah Sutherland (the original firm) and the said bank, and their said agent, that any acceptances of theirs falling due at said branch, should be placed to their account when due, and that funds to repay the bank for any advances so made by it, in placing such bills to their account as aforesaid, should be provided by the said D. and J. Sutherland with all convenient speed." It is stated that this "understanding was acted on for several years," by advances to the parties "on their own security alone," by "allowing them to overdraw their account," and by placing bills accepted by them "as they fell due" to their account, that is, "retiring such bills" on the personal security of the acceptors alone. In December, 1837, and January, 1838, the period when the account was closed, several bills thus fell due, and, as usual, were placed to account. But it is alleged, that although thus "retired" in the usual way, and placed to the debit of the acceptors, the agent of the bank thought fit to send a notice to the parties in whose favour the notes were drawn, that they were "dishonoured," and lying unpaid at the branch bank, but were, in consequence, taken up by those parties. The result of this blow to its credit was the failure of the house of Sutherland, ending in a compromise with its creditors. That compromise being for 1*l.* in the pound, with a collateral guarantee for 2*s.* in the pound only of that amount, it may be assumed that the house was not previously in the possession of much, if any, capital, but traded on its banking credit, as is common in Scotland. The allegation of damages in the cause against the Commercial Bank arises out of the statement that the bank agent having duly entered the bills to the credit of the acceptor, in the regular course, which was the same as paying them for his account, was not justified in advising the holders subsequently that they were unpaid and dishonoured. And, moreover, that the bills having by the act of the bank agent in so placing them to account become the property and at the risk of the bank, as being uncovered by funds in hand of the acceptor, that, therefore, apart from the question of other damage alleged, the amount of which is specially laid, the Commercial Bank, as responsible for the act of its agent, is liable to refund the amounts so received from the holders of the bills for the benefit of the estate, or rather of the party guarantee for part of the composition effected, who claims to have made larger advances than the sum agreed upon for the liquidation of the affairs of Mr. Sutherland. The bank would, therefore, in such a case, be placed in the situation of creditor of the estate by such amount, to which it demurs and joins issue.

The particularity of the case, of which the outline is thus given, so far as bearing upon the Scotch banking system, consists in the want of check which is apparent on the part of the bank in respect of its agents, and the looseness of accounts resulting from the absence, or perhaps impossibility, of any efficient plan of control. For in this instance, it is admitted by the bank that "no bills of Messrs. Sutherland are reported to be past due in the monthly returns for December, 1837, and January, 1838;" and that "none of these bills (the bills first placed to account and then noticed as dishonoured and recovered as stated) appear to have been overdue during these months, the following bills having been debited to their account when there were no funds in it, and consequently not appearing as dishonoured, though in reality not paid at their respective dates." So that, it appears, they really had been taken to account, and became the property and risk of the bank itself, as urged for the Sutherlands, although the amount was subsequently charged against other parties and recovered by the agent. Of such recovery and proceedings, it is seen that the bank confesses to have had no notice in the "monthly returns" of the agent at the time, although the omission was, doubtless, rectified afterwards. But wherein consists the merit of a system in which agency accounts can be left so completely without check as in this instance? When it is considered that the Commercial Bank has fifty branches, the extreme risk incurred by a system so lax and improvident must be apparent, for the "monthly returns," it is clear, can form no safer guide in fifty than in one case, or rather with the increased number comes a proportionate increase of risk, from negligence and impossibility of control. The bank is evidently at the mercy of its branches, and the "monthly returns" can scarcely be a trustworthy criterion at any time of the state of its affairs. No presumption of dishonesty or breach of faith is here intended or supposed against agents. As in the present case, negligence of prompt advice alone may be chargeable, an earnest desire to retrieve an oversight in extending credit too far, or from information received too late, endeavouring to obtain indemnification for what was likely, perhaps, to result in a bad debt. But the possibility of such negligence, of too easy extension of credit, or other unguarded mistakes, against which the chief bank can provide no efficient check, is quite sufficient to show the perilous defects of the vaunted Scotch system. It will be remembered that the Northern and Central and other English joint-stock banks were avowedly founded on the Scotch system, with inspectors besides duly authorized and deputed at stated periods, or at any time, to examine into the accounts and business of the branch agencies on the spot, and report the same to the directors at their regular sittings. Everything went on swimmingly, it is known, until the occurrence of a hitch in the money-market; the accounts appeared to be in order, and the discounts of the branches were on the most extensive scale, and therefore in the most prosperous state. The agents had every inducement to extend business to the utmost, because liberal commissions were in proportion, and the prodigality of bank paper issues was commensurate with the ease with which that spurious imitation of money could be coined.

The final wind-up will not soon be forgotten. Unsound as was the system at the head offices, it was found absolutely rotten and corrupt at the branches, and with immense funds figuring on the books and in the "monthly returns" banks were discovered to be insolvent or forced to a liquidation. So much for the Scotch system, so eulogized here and by "Professor Dew" in the United States, which has stood its ground so far in Scotland better than elsewhere, not by its intrinsic excellence or superior practice perhaps there, but because, as it is of more ancient date and habituated to paper-money only, it has very rarely been tested by popular distrust, whilst it is guarded against the dangers of a sudden run for specie by the inconvertible character of the paper-currency issued. The system, such as it is, has not however been without its failure there at a period not very far back.

NEW LOCOMOTIVE ENGINE.—A carriage, on a new principle, with cylinders instead of wheels, was tried a few days since at Brussels. After leaving the Rue du Nord, it proceeded down the Boulevards de l'Observatoire, Regent and Waterloo. When it arrived at the Porte de Hal, the two horses which had brought it there were unharnessed; and six men, with ease, dragged it back again up the steep ascent of the Boulevard Waterloo. A second experiment was made the same afternoon; the carriage was laden with 30,000 kilogrammes, and required only two horses to set it in motion.—*Inventors' Advocate.*

NUMBER OF STEAM-BOATS, LOCOMOTIVES, AND OTHER STEAM-ENGINES, IN THE UNITED STATES.—The whole number of steam-engines of every kind in the United States, reckoning one to each boat, is ascertained and estimated to be 3010. Of these, 2653 have been ascertained, and 357 are estimated, in places from which the returns are either defective, or not received at all. Of this whole number, about 800 are supposed to be employed in steam-boats; of which 700 are ascertained, and 100 estimated. About 350 are employed in locomotives on railroads; of these 337 are ascertained, and 13 estimated. The residue, being 1860, are used in manufactories of various kinds; of these 1616 are ascertained, and 244 estimated.

PURIFICATION OF COPPER.*

The art of manufacturing copper appears to have been known from the most remote antiquity: indeed, judging from the purity of the coins and warlike instruments which have descended to us, we might at first suppose that this, like some other of the arts formerly in use, had been partially lost, and that the ancients were better acquainted with the mode of making pure copper than we are at the present day. The great purity of their cupreous alloys is, however, much better accounted for, by attributing it to the richness of the ores then in use: for, in all probability, they were unable to extract copper from such poor pyritic ore as is now employed for that purpose, and from which English commercial copper is obtained, in a state of sufficient purity for the ordinary purposes to which copper is applied. It is always, however, contaminated with the foreign matters existing in the ore; these are chiefly iron, lead, arsenic, sulphur, and antimony—carbon, too, is occasionally imparted during the process of reduction. These impurities vary from 2 to 7 per cent., and greatly impair the ductility and malleability of the metal. With one-half per cent. of arsenic, sulphur, or antimony, copper is decidedly brittle under the hammer, and with 1 per cent. this effect becomes very obvious. Lead and iron have a less injurious effect; but in the proportion of 2 per cent. they materially affect the colour and texture, and the alloy has a harsh, dull, and mottled appearance when polished. With a very small quantity of carbon copper is brittle, and has a grey, uneven fracture.

The Swedish copper being almost free from these impurities, has long been held in high estimation, not only in this country, but also on the continent, where the finer kinds of brass are made almost solely with it, to the exclusion of the English copper; a cheap and effectual mode of removing the impurities from which has long been a desideratum. The following method will be found to answer that purpose, and its simplicity is such as to require no particular care or management on the part of the workmen:—

Take of impure copper	100 parts
" copper scales	10 "
" ground bottle glass, or any other flux	10 "

heat the whole together in a covered crucible, and keep the copper in a state of fusion for twenty minutes or half an hour, at the end of which time it will be found at the bottom of the crucible perfectly pure. The quantity of copper scales must vary in proportion to the supposed impurity of the copper to be operated on; but the proportions here given will be found to answer very well for the average kind of English copper. The explanation of this process is sufficiently simple; the impurities contained in the copper, consisting, as we have seen, of iron, lead, arsenic, &c., combine with the oxygen contained in the copper scales, and form oxides or acids, which are dissolved by the flux, or fly off in a gaseous form, leaving the purified copper, together with that reduced from the scales, at the bottom of the crucible; consequently, the copper obtained exceeds that put into the crucible, the gain generally averaging from 1 to 1½ per cent. In this way I have obtained perfectly pure copper from brass, bell-metal, gun-metal, and several other alloys, containing from 4 up to 50 per cent. of iron, lead, antimony, tin, bismuth, arsenic, &c.

In my earlier experiments I made use of the oxide of copper obtained from the acetate or sulphate, and proposed in practice to employ some of the native oxides of sufficient purity, such as the malachites. Mr. Aikin, however, has since kindly pointed out to me the scales of copper, as the cheapest and most abundant source for obtaining the oxide, since they are produced in large quantities at every copper manufactory. I have repeated nearly the whole of my experiments with them without observing any variation in the result, as might, indeed, have been anticipated.

ON A NEW CALORIMETER,

By which the Heat discharged in Combustion may be exactly measured.

BY ANDREW URE, M.D.†

In these researches, which are still in progress, the first point which I seek to ascertain is the proportion of volatile and fixed matter afforded by any kind of fuel—as, for example, pit-coal—when a given weight of it is subjected, in a retort or covered crucible, to a bright red heat. The result of this experiment shows how far the coal is a flaming or gas coal, and what quantity of coke it can produce. The second preliminary point of importance which I determine with regard to coals, is the amount of sulphur they may contain; a circumstance which has not hitherto been made the subject of precise investigation, in this country at least, but which is of great consequence, not only as to their domestic use, but to their employment by the ironmaster and the manufacturer of gas. That good iron cannot be made with a sulphureous coal, however carefully coked, has been proved in France by a very costly experience. In general, when a coal leaves 15 or 16 per cent. of ferruginous ashes, we may conclude with certainty that it contains sulphur in corresponding proportion; for this substance exists always, I believe, in pit-coal, in the form of pyrites, but often disseminated or combined, so as to be invisible, unless by microscopic means. The most ready and exact method of determining rigidly the quantity of sulphur in any compound, is to mix a given weight of it with a certain weight of carbonate of potassa, nitre, and common salt, each chemically pure, and to ignite the mixture in a platinum crucible. A whitish mass is obtained, in which all the sulphur has been converted into sulphate of potassa. By ascertaining, with nitrate of baryta, the amount of sulphuric acid present, that of sulphur becomes known. By such a process, applied to different samples of coals, sent to me for analysis, I obtained the following results:—

Gas coals No. 1. Sulphur in 100 parts	3.00
" 2	3.90
" 3	2.42
" 4	3.80
" 5	2.50
" 6	2.29
" 7	3.40
" 8	3.50

Coals for puddling cast-iron to be converted into steel:—

1. Hard foliated, or splint, sp. grav. 1.238	0.80	
2. ditto	1.290	0.96
3. ditto	1.273	3.10
4. Cubical, and rather soft	1.267	0.80

The presence of much sulphur in a gas coal is a great evil, because it affords, in its decomposition, so much sulphuretted hydrogen, as requires an onerous process of washing or purification, which impoverishes the gas, and impairs its illuminating power by the abstraction of its olefiant gas or carburetted hydrogen. Hence I found, in a specimen of coal gas, as generated in the retorts of one of the London gas companies, no less than 18 per cent. of olefiant gas; but in the same gas, after its purification from sulphur, I found only 11 per cent. With a coal, such as No. 4 of the second series given above, at least 10 per cent. of the light might be economised. The apparatus which I employ consists of a large copper bath, capable of holding 100 gallons of water; it is traversed, forwards and backwards, four times, in four different levels, by a zig-zag horizontal flue, or flat pipe, nine inches broad, and one inch deep, ending below in a round pipe, which passes through the bottom of the copper bath, and receives there into it the top of a small black lead furnace. The interior furnace, which contains the fuel, is surrounded, at the distance of an inch, by another furnace, which case serves to prevent the dissipation of heat into the atmosphere. A pipe, from a pair of double-cylinder bellows, enters the ash-pit of the furnace at one side, and supplies a steady current of air to keep up the combustion, kindled at first by half an ounce of red-hot charcoal. So completely is the heat which is disengaged by the burning fuel absorbed by the water in the bath, that the air discharged at the top orifice has usually the same temperature as the atmosphere. In the experiments made with former water calorimeters, the combustion was maintained by the current of a chimney, open at bottom, which carried off at top a quantity of heat very difficult to estimate. My experiments have been directed hitherto chiefly to a comparison of the heating powers of Welsh anthracite, Llangennech, and a few other coals. I have found that the anthracite, when burned in a peculiar way, with a certain small admixture of other coals, evolves a quantity of heat at least 35 per cent. greater than the Llangennech does, which latter is reckoned by many to be the best fuel for the purposes of steam navigation. One half pound

of anthracite, burned with my apparatus, heats 600 pounds of water 10 deg. Fahr., viz., from 62 to 72 deg., the temperature of the atmosphere being 66 deg.; so that there is no fallacy occasioned either by the conducting powers of the surrounding medium, or by a chimney current. We thus see that one pound of anthracite will communicate to at least 12,000 times its weight of water, an elevation of temperature of one degree, by Fahrenheit's scale. For the sake of brevity, we may call this quantity, or energy, 12,000 unities of heat. One pound of Llangennech, in the same circumstances, will afford 9000 unities; one pound of good charcoal, after ordinary exposure to the air, affords 10,500; perfectly anhydrous charcoal would yield much more: one pound of Lambton's Wall's End coals affords 7500 unities. It deserves to be remarked, that a coal, which produces in its ignition much carburetted hydrogen and water, does not afford so much heat as a coal equally rich in carbon, but of a less hydrogenated nature, because, towards the production of the carburetted hydrogen and water a great deal of latent or specific heat is required: indeed, the evaporation of unburnt volatile matter from ordinary flaming coals abstracts unprofitably a very large portion of their heat, which they would otherwise afford. Hence, those chemists who, with M. Berthier and Mr. Richardson, estimate the calorific powers of coals by the quantity of carbon which they contain, or the quantity of oxygen which they consume, have arrived at very erroneous conclusions. The amount of error may be detected by experiments on the coals of flaming coals. M. Berthier examines coals for their proportion of carbon, by igniting a mixture of each, finely pulverised, with litharge, in a crucible, and estimates one part of carbon for every thirty-four parts of lead which is reduced. I have made many researches in this way with both charcoal and anthracite, and have obtained very discordant results. In one experiment ten grains of pulverised anthracite, from Merthyr Tydvil, mixed with 500 grains of pure litharge, afforded 380 grains of metallic lead; in a second similar experiment, ten grains of the very same anthracite afforded 450 grains of lead; in a third, 350 grains. In one experiment with good ordinary charcoal, fresh calcined, ten grains, mixed with 1000 of litharge, afforded no less than 603 grains of metal. The crucible was, in each case, covered and luted. My future researches, which are intended to embrace every important variety of fuel, natural and artificial, will be made with an apparatus somewhat modified from that here described. Three furnaces will be inclosed within each other, with a stratum of air or ground charcoal between each, so as to prevent all loss of heat into the atmosphere, and thereby to transfer the whole heat disengaged by combustion into a large body of water, of a temperature so much below that of the atmosphere at the beginning of the experiment, as it shall be above it at the conclusion.

GEOLOGY.

[We copy the following interesting letter from the columns of the *Morning Advertiser*.—]

Sir,—In a former communication, I spoke of the iron and porphyry mountains, and of the beautiful variegated marbles inclined upon their escarpments. I am still here investigating this region of geological wonders. Apparently the same strata of old, not red, but white saccharine sandstone, on which I now stand, appears twelve hundred miles eastward on the declivities of the Alleghany Mountains, and, as here, horizontally overlying the magnesian limestone. The same may be seen at different elevations and depressions occasionally in the intermediate space. Wherever this sandstone is found depressed, so as to form a basin, upon and within it repose the carboniferous limestone and coal measures, while, in either or both, the sandstone and carboniferous limestone, salt water will be found. Some of the natural brine springs require three hundred gallons of water to make one bushel of salt. In the immediate vicinity of these springs or licks may frequently be found the gigantic bones of the mastodon. Beneath the white sandstone, as I observed, lies the magnesian limestone in a horizontal position. Imagine to yourself hundreds and hundreds of conical mountains, together with dykes and ridges of various elevations up to the height of seven or eight hundred feet, all rising up through the horizontal strata of sandstone and limestone. Such is the picture before me. You travel six or eight miles, and you come to a mountain of sienite entirely, and near its base, or not far distant, you will find veins of sulphuret of lead, and sometimes sulphuret of copper with cobalt. Not unfrequently the limestone is rent asunder, and the intermediate space is filled with sulphate of barytes, beautifully crystallised Iceland spar, giving double refraction, together with rich stones of galema. Sometimes these veins spread out between the laminae of the limestone in sheets, and fill large caverns with lead, &c. The Iceland spar, or carbonate of lime, is here, by the miners, called glass-tiff, and the sulphate of barytes, ball-tiff. Again, you travel on a few miles further, and you strike upon a mountain entirely of milk-white quartz, very hard to break. Continuing onward, you will, perhaps, next come to a mountain of solid specular oxide of iron 300 or 400 feet in height, or of porphyry, jasper, or granite. Within a few yards of the place where I am now seated, the limestone and sandstone are both cut through by a dyke of trap running nearly north and south. A little to the east of this trap-dyke, is a much larger dyke of grey porphyritic granite, affording excellent stone for building. Immediately west of the trap-dyke is a vast dyke or bed of excellent Egyptian granite extending from one to two miles in length, and at least one-eighth of a mile in breadth. The felspar in this granite is compactly crystallised, and of a fine flesh-red colour. The quartz is white, and the mica black. It appears to be entirely free from oxide of iron, and is not far from navigable waters. I hope it will be in my power hereafter to forward specimens of the above localities to you. Not unfrequently similar dykes of granite, &c., rise to within a few feet of the surface of the ground, and are discovered only in the beds of the streams where the water is low, or by removing the gravel, &c., from the beds of the water-courses. After two years of patient investigation, I can speak with confidence on this point, and refer to particular localities. This fact at once settles a point which has much perplexed American geologists, by establishing the origin of the boulders, or "lost rocks," in the great valley of the Mississippi. I am, Sir, with sincere respect,

Your obedient servant,

FORREST SHEPHERD.

State of Missouri, 100 miles south-west of the mouth of Missouri River, Aug. 1.

CONNEXION OF GEOLOGY WITH THE ARTS.

We extract the following passages from the "Report of the Council of the Royal Institution of South Wales," recently published, and obligingly forwarded to us:—

"In reviewing the transactions of the year which has just expired, there is a subject, which it gives the council much pleasure to place before the meeting, namely, the recent establishment of a scientific intercourse with an institution of a very important description, powerfully promoted by the government of the country, which has sprung into existence in the metropolis, under the title of 'The Museum of Economic Geology.' The immediate aim of this establishment is to make the researches of philosophy available to the pursuit of the useful arts. The foundation of it is well worthy the support of an enlightened nation, and, under proper management, it cannot fail to become the source of valuable information to commercial enterprise, and a school of instruction in all those branches of industry, on the healthful growth of which the happiness and prosperity of this great kingdom mainly depend. To the inhabitants of a mining and manufacturing district its importance readily suggests itself, and they naturally become anxious to participate, with as little delay as possible, in the benefits it will yield. Influenced by a desire to make these available to their own institution, the council addressed to Mr. De la Beche (who, under the direction of the Commissioners of Woods and Forests, superintends the practical details of the museum in question), an expression of their sentiments on the subject, and they are happy to find that, from the intercourse proposed, advantages are likely to flow that will prove mutually beneficial. It naturally must happen that the opportunities of a well-regulated provincial institution will be ample in its own immediate neighbourhood, and in a district such as the southern part of Wales, which, for mineral wealth and manufacturing industry, yields to none, the facts that come before it, whether illustrative of the materials its mines produce, and its population work into form, or of the state and condition of the arts by which those materials are extracted from the earth and devoted to use, must be of considerable value to a society instituted for the purpose of applying science to the economic objects of life; while, on the other hand, the wide range and powerful means of the metropolitan society, bringing a collection of materials from a multitude of sources, will enable it to effect an extensive and instructive diffusion of the knowledge it obtains, and thus repay what it receives from one locality with the information it derives from another."

BURNING MINE.—One of the coal mines near Pottsville, in America, accidentally caught fire last winter, and in spite of all efforts to extinguish it, it still burns as fiercely as ever.

PROCEEDINGS OF PUBLIC COMPANIES.

ST. HILARY MINING COMPANY.

A special general meeting of the shareholders in the above company was held at the offices in Great St. Helen's, on Tuesday, 23d inst.

J. C. BLANCKENHAGEN, Esq., in the chair.

The SECRETARY read the advertisement convening the meeting.—A report from Captain John Sampson, and also one from the agent at the mine (Capt. Charles H. Richards) was read—for which see our "Mining Reports."

Upon the recommendation in Captain Richards's report, that it would be advisable to erect a new sixty-inch cylinder engine in room of the one now in use, which was too small to enable them to sink below the present bottoms, considerable discussion ensued; one or two proprietors considered it objectionable that a larger engine had not been erected at first, and thus have saved expense, but Captain Richards, sen., who was present, satisfactorily explained that the present engine was considered quite large enough at the time of its erection, and before they could know anything of the prospects of the mine at its present depth; now, however, when the prospects at the eighty fathom level were of so cheering a nature, it was advisable—immediately necessary—to have a larger engine, to enable them to work the mine to any depth which might be required.

It was then moved by Mr. DAY, seconded by Mr. FAIRBURN, and carried unanimously—"That a call of 5s. per share be now made."

It was moved by Mr. CAZENOVE, seconded by Mr. HOYS, and carried unanimously—"That the thanks of the meeting are due, and are hereby given, to the chairman and directors, for their uniform and general attention to the interests of the company."

The CHAIRMAN returned thanks, and congratulated the proprietors on the present favourable prospects, and the meeting separated.

NORTHAMPTONSHIRE BANKING COMPANY.

The third annual meeting was held on Thursday week, at the Angel Hotel, Northampton. The report of the directors declared a dividend of 6d. per cent. for the year ending the 30th September, being an increase of 1 per cent. upon the dividend of the preceding year, and also stated that, after providing for all bad and doubtful debts, a sum of 1034l. 16s. 7d. had been added to the surplus fund. The report and statement of liabilities and assets appeared to give great satisfaction to the proprietors present, and a series of appropriate resolutions having been unanimously adopted, the meeting separated.

AGRICULTURAL AND COMMERCIAL BANK OF IRELAND.

The annual meeting of the Agricultural and Commercial Bank of Ireland took place on Monday, the 21st inst., at the bank-house, 63, Fleet-street, Dublin. Alderman WATSON in the chair.

The report and accounts exhibited assets over the liabilities amounting to upwards of 200,000l., and the system of management for the last year met the unanimous approval of the whole meeting. Hugh Magill and John Bates, Esquires, attended as a deputation from Belfast and the northern shareholders generally.

REMOVAL OF THE WRECK OF THE "ROYAL GEORGE" BY SUBMARINE EXPLOSION.

Those officers and gentlemen who have paid frequent visits to Spithead to see the operations, and who have examined the state of the fragments brought up, are now unanimously of opinion that it would have been perfectly chimerical to attempt the removal of the wreck of the *Royal George*, in its present state, by any mechanical means, however powerful, without the aid of gunpowder in large masses. The charge fired on Tuesday was about 3400lb. The cause of it not exploding on Saturday last was ascertained in the most satisfactory manner. Both the large charge of gunpowder and the small priming charge of about three pounds were found to be perfectly dry; but the two conducting copper wires which were attached to a rope had rubbed hard against the wreck on lowering the cylinder down, and thereby they had been deranged and brought in contact with each other, and thus the voltaic circuit was completed, and the spark came back without reaching the powder. The wires thus acted upon were prepared about a year ago at Chatham, and not in so perfect a manner as another set fitted up lately on board the *Success* hulk, to which that accident would not probably have happened, and which will be used exclusively in future. Colonel Pasley has had two of the cylinders made at Chatham-yard taken to pieces, and has ascertained the cause of their insufficiency to have been a mistake on the part of the ingenious and skilful mechanic who superintended the making of them. The Colonel had caused each cylinder to be composed of a wooden buoy inside, to be made and finished exactly like the mooring buoy, for shipping, by caulking and paying it over with pitch and tar, which was then to be enclosed in a leaden cylinder, perfectly water tight, secured by pieces of elm as well as by matting and by a rope moulding against the injuries to which that soft metal would otherwise have been liable. Nothing could possibly have been better than the workmanship both of the leaden and wooden cylinders; but unfortunately the caulking and paying over of the latter had been omitted. Hence in the first cylinder which failed, two small holes having been made through the lead by some point, probably the end of a bolt projecting from the wreck, the water penetrated through the pores of the wood, and spoiled the whole of the powder. In the second cylinder there was careless workmanship, not on the part of the men who made the buoy, nor of the plumbers; but in putting on the outer casing and moulding to secure the lead, one nail had been driven entirely through the metal, and some other nearly through it; and thus the water got in, and, forcing its way through the pores of the wood, about one-fourth of the powder was spoiled, though it had only remained under water about an hour. By this unfortunate mistake in the construction about 3000lbs. of gunpowder were spoiled, and a good deal of time lost in consequence, whilst the two divers, whose services might have been better employed, were exclusively engaged in attempting to get up the first cylinder, which was not recovered until a week after it went to the bottom. Colonel Pasley has made up his mind in consequence never to use a double casing in future for such explosions, but to confine himself to one material, whether wood or metal; but upon the whole he considers the wrought iron cylinders, with conical ends (of which he used a number of small ones, made under his direction, by Mr. Stebbing, and one large one, by Mr. Taplin), to be the best and most convenient vessels for submarine explosions, especially if it be necessary to empty and refill them, which may sometimes be required.—*Hampshire Telegraph*.

WATER-POWER.—We had recently an opportunity of witnessing what we have no doubt will prove a valuable invention in the application of water-power. Some of our readers, no doubt, are acquainted with the machine called Dr. Barker's mill. To such of them as are not, it may be sufficient, perhaps, to explain that it operates by the reaction of the water, and is of nearly the same construction as the rotatory steam-engine, of which so much has been said lately. The common water-wheel is acted on either simply by the gravity or by the impulse of the stream—the weight of the water falling on float boards, or its force rushing against them. Barker's mill is moved by the reaction of the impulse which the water has acquired at the bottom of a fall. It is exceedingly simple in its structure. The water is conveyed in a pipe from the highest elevation at which it can conveniently be collected to a horizontal pipe, of the proper length, made to move round a shaft. The horizontal pipe is perforated at the two ends, on opposite sides, and the reaction of the water rushing out drives these arms rapidly round in a retrograde direction. The improvement on Barker's mill, which we have seen lately, and for which a patent has been taken out by Mr. Stirrat, of Nethercraig, near Paisley, consists (besides an ingenious water-joint and the application of something like the steam-engine governor) in a beautiful contrivance for preventing the friction which arises from the centrifugal action of the water on the revolving arms of the machine. To remedy this, the patentee has had the arms of his machine made with an eccentric curve, calculated according to the height of the fall, so that, when the machine is in operation, the water rushes out, at its full speed, in a straight line from the centre, to the extremity of the arm, where its power is wholly exhausted by action on the sides opposite the orifices by which it runs off. The advantages of this machine are said to be very great. In the first place, while, by the common water-wheel, in some circumstances, only a small portion of the water-power can be used, and under the most favourable circumstances not more than 65 per cent., it is calculated that by this new machine not less than 95 per cent. of the motive power of the water is rendered available. Secondly, the most trifling rivulet, provided it have a good fall, can be taken advantage of by the new machine; and, thirdly, the expense of the improved Barker mill is not more than one-fifth of the expense of a water-wheel, to work in the same stream.

Aberdeen Herald.

* The gold medal of the Society of Arts was presented to Mr. Lewis Thompson, Old Barge House, Lambeth, for his method of purifying copper, from the recent volume of Transactions of which society, we have extracted the above.

† This paper was read by Dr. Ure before the section of "Mechanical Science," at late meeting of the British Association, at Birmingham.

men from among the mining population, who might be employed at a cheap rate on all the more difficult works.

The populous towns of the north of England, and the constant traffic of passengers and goods between them, have naturally attracted the early attention of the railway shareholder, and drawn to them at once the large capital necessary to effect railway communication between them. With Cornwall, the case is different; although possessing, as we have shown, numerous inducements for the construction of a railway, they are of a less obvious and striking character, and require to be developed by a closer examination into facts. These advantages, it will be the business of the meeting to place in a prominent point of view, and to make known to the whole country, while it must also give assurance to the capitalist, that every facility will be given to the economical execution of so beneficial an undertaking.

The recent proceedings of the Bank of England, in refusing to discount all bills either drawn by or bearing the endorsement of banks issuing their own notes, has naturally produced a very considerable sensation throughout the country, and is, we fear, the commencement of a struggle in which the best interests of the nation are likely to be sacrificed to the private benefit and caprice of the great Corporation of Threadneedle-street. It was at first naturally supposed that a measure fraught with such injurious consequences to the country, and threatening indeed the welfare and security of every individual engaged in commercial transactions throughout this great mercantile community, could hardly be persevered in when the evils resulting from it were pointed out, and when it was known to the Bank directors that a powerful body of bankers in the north were not disposed to submit quietly to such an unprecedented departure from the established modes of business. Little doubt now remains, however, that this hope has been disappointed—completely and entirely disappointed—and that the Bank of England is determined to persevere in its plans, at whatever cost to the commercial interests, or, perhaps, in the end, real injury to its own prosperity.

Numerous as are the instances in which the Bank has thrown our commerce into confusion by its ill-judged or self-interested acts, the present proceeding stands prominent, from the mischief and confusion it is likely to create, and that too at a period when the commercial world ought to look up to this great national establishment for assistance and support. One thing is, however, certain, a strong feeling is already abroad on the subject, and will go on increasing in intensity as the evils of the measure gradually develop themselves. From this reaction must follow, and the Bank will find that it has not a feeble or a passive body to deal with, when it thus wantonly attacks the great body of the banking and commercial interests of the country. Of the feeling which prevails on the subject, and the determination to resist, and, if possible, counteract this arbitrary proceeding, we cannot have a better specimen than that afforded at the last meeting of the Bank of Manchester, and reported in a late Number of our Journal. After remarking in their report that the decision on the part of the Bank of England must create great dissatisfaction in a powerful and influential body throughout the kingdom, and that it will require much circumspection on the part of those whose interests are at stake in the adoption of measures necessary to counteract its effects, the directors proceed to observe that "they are not prepared or disposed to compromise or surrender any of those great and independent principles upon which the Bank of Manchester has been conducted for so many years, and the proprietors may confide in their employing whatever experience and judgment they possess, to prevent the measures of the Bank of England from operating injuriously to their institution." When we look at the numerous public and private banks of issue, against whom the measure in question is obviously directed, and whose interests will be seriously affected by it, there can be no doubt that the sentiments expressed in the above report are not confined to the directors of the Bank of Manchester, but that they will widely and generally prevail, and will, of course, be as generally acted upon.

The Joint-Stock Banks alone will form a powerful and united body, and as it is against them that the refusal is chiefly directed, it is incumbent upon them to act with spirit and unanimity. These institutions have already had to encounter many serious difficulties, and they have gained at least the advantage of learning to act in concert, and dismissing minor differences in endeavouring to effect a common good. Around this powerful nucleus we shall doubtless see a numerous assemblage of the commercial interest, of which any portion can scarcely be said to be exempt from the effects of the late resolution of the Bank. The power thus concentrated for mutual protection, against a measure, unprecedented, we believe, in itself, and most inimical to the commercial interests of the whole community, will be one well capable of acting in its own defence, and proving that no corporation, however powerful or wealthy, and although strengthened by the privileges of monopoly, can venture with impunity on any act productive of such extensive mischief and confusion to the whole commercial world.

The issue of the contest we can hardly doubt, nor can we fear that it will be otherwise than successful; the bank will probably, in the end, feel itself compelled by circumstances either to rescind or greatly to modify its late resolution, and will hereafter be more careful in assuming an attitude of hostility towards other banking institutions, and more especially the joint-stock banks. If the banking and commercial interest is true to itself in the contest, the result can hardly be otherwise than what we have anticipated.

It is certainly, however, a remarkable circumstance, and one on which we cannot forbear commenting, that at a period of commercial embarrassment like the present, so far from the great national bank of the country assisting, or being able to assist, the commercial interest, it is, as it were, placing itself in a hostile attitude, and threatening to come into collision with other banking institutions. Surely the great powers and exclusive privileges of the Bank of England ought to be productive of greater benefits to the country than any which we have at present in view, and were conferred for

very different purposes to those for which we see them applied. The charter of the Bank of England has existed for nearly a hundred and fifty years, and during that time the bank has been infinitely the wealthiest and most powerful corporation which has ever known. If we inquire into the benefits which have resulted to the country from bestowing this vast power upon a small body of capitalists, we fear they will be found, to say the least of it, very disproportionate. When we look to those terrible periods of commercial depression, which are, unhappily, almost of periodical recurrence in this country, and when a national bank, invested with exclusive privileges and extraordinary powers, might be expected to lend effectual aid, how often shall we find the case exactly the reverse, and see that the Bank of England is intent alone upon its own interests, and totally inadequate to render that support to commerce which might naturally be expected from it.

The evils resulting from this state of things need hardly be pointed out—many of them, it is true, are traceable to causes over which the bank can have no control; and there is at present little hope or prospect of these ulterior evils being removed—deeply interwoven as they are with the whole monetary and commercial system of the country. It is, however, reasonable to suppose, that some better system might be devised—that some controlling power might be brought into action which would afford the required relief in times of depression, or which might even go further than this, and check their, unfortunately, too frequent, recurrence. The difficulty of such a plan is apparent enough, but it would be premature to pronounce it impossible. The present is, beyond all others, an age of improvement, and things which we now daily witness would, a few years since, have been deemed impossibilities, while, therefore, every thing else advances, there can be no absolute necessity that so important, so vital an object as the effectual regulation of our monetary system should alone stand still.

It affords us much satisfaction to see that our efforts for the benefit of the miner (now suffering under a factitious depreciation of the value of his produce) has excited attention in the mining districts, as evidenced by the numerous letters we have received on the subject. A Correspondent in Cornwall, whose letter is inserted in our columns of to-day, calls upon us most earnestly to renew our exertions for the protection of the miner—and this we shall not fail to do. Press of other matter compels the subject to stand over in our present Number, but it still continues to receive our attention, and shall speedily be brought forward again. It is emphatically declared by our Correspondent, who is evidently deeply interested in copper mining, that "ruin must follow such a standard." That ruin we are anxious, most anxious to avert, and if the mining interest is true to itself we believe it may be done.

In our last Number, we remarked upon the peculiar position of the Chester and Crewe Railway, and expressed our opinion that the arrangement proposed by the directors of amalgamating the undertaking with the Grand Junction Railway, on the terms stated at the late meeting of the proprietors, was, under all circumstances, the best that could be adopted. It must be, indeed, a matter of regret, that the undertaking could not be carried out by its original projectors with due regard to local interests; but this not being the case, we believe the directors have faithfully discharged their duty to the company, though placed in a difficult and trying situation. We have elsewhere inserted the sensible remarks of the *Chester Chronicle* on the subject in question.

THE FUNDS

CITY, FRIDAY EVENING.

Consols closed at 90½ money, and 90½ 91 time. The Three-and-a-Half per Cent. Reduced Annuities 97½, and the New Three-and-a-Half per Cent. 98½. Bank Stock 179½ 180, and India 246½ money. Exchange Bills of the largest amount 3 1 dis.; the second class par 2 dis.; and the smallest 1 2 pm. Portuguese New Five per Cents 36½, and the Three per Cent. ditto 24½. Spanish Bonds, with May Coupons, 29½; Passive 7½; Deferred 13½. Colombian Bonds 32½, and Mexican Six per Cent. Bonds 32½. French Five per Cents 111½ 25c., with the Exchange at 25½ 40c. Dutch Two-and-a-Half per Cents 52½; Old Fives 100½; and the New Loan 96½ 97.

LATEST INTELLIGENCE.

CITY, TWELVE O'CLOCK.—Consols, Money, 90½; Account, 91; New 3½ per Cents., 98½; Three per Cents. Reduced, 89½; New 3½ per Cent. Reduced 97½; Long Annuities, 13½; Bank Stock, 179½ 94; East India Stock, 245 7; Exchequer Bills, 3 1 dis.—Railways:—Birmingham and Derby, 16 14 dis.; Blackwall, 2 1½ dis.; Brighton, 12½ 1 dis.; Bristol and Exeter, 27 25 dis.; Eastern Counties, 10½ 10 dis.; Greenwich, 13 14 per share; Great Western, 5 4 dis.; Gloucester and Birmingham, 27 25 dis.; London and Birmingham, 50 52 pm.; New, 16½ 17½ pm.; Manchester and Birmingham, 8 6 dis.; Manchester and Leeds, 6 8 pm.; North Midland, 4 3 dis.; South-Western, 39½ 40½ per share; York and North Midland, 6 8 pm.; Croydon, 9 ½ per share; Scirp., 4 ½ pm.—London and Westminster Bank, 1 ½ pm.; London Joint-Stock Bank, 1½ 24 pm.

TRURO, OCT. 24.—Average standard, 1027. 7s. 0J.—Average produce, 8.—Average price, 5l. 8s. 6d.—Quantity of ore, 3634.—Quantity of fine copper, 293 tons 12 cwt.—Amount of money, 20,068l. 19s. 6d.—Average standard of last sale, 1011. 7s.—Produce, 8½.

PRICES OF SHARES IN BIRMINGHAM.—Stourbridge and Kidderminster Bank, 19l.—Manchester and Birmingham Railway, 19l.; Birmingham and Derby, 64l.; Cheltenham and Great Western Union (37l. 10s. paid), 30l.—Old Birmingham Canal, 218l.; Worcester and Birmingham, 68l.; Warwick and Birmingham, 270l.—Birmingham and Staffordshire Gas, 72l.—General Steam Navigation, 24l. 15s.—Midland Counties Herald.

PRICES OF SHARES AT LIVERPOOL.—Edinburgh and Glasgow Railway, 13l. 15s.; London and Birmingham, new shares, 31l. 5s.; Manchester and Birmingham Extension, 6l. 10s.; North Midland, 8l.—Gore's Liverpool Advertiser.

BANK OF ENGLAND.—QUARTERLY AVERAGE OF THE WEEKLY LIABILITIES AND ASSETS, FROM JULY 23 TO OCT. 13, INCLUSIVE:—

LIABILITIES.		ASSETS.	
Circulation	£17,612,000	Securities	£34,939,000
Deposits	6,734,000	Bullion	2,525,000
	£24,346,000		£27,464,000

Downing street, October 18.

EXPORTATION OF THE PRECIOUS METALS.—The exportation of the precious metals from the port of London to foreign ports for the week ending the 17th inst., was as follows:—Gold bars to Rotterdam, 1172 oz.—Silver coin to Hamburg, 240,429 oz.; ditto to Rotterdam, 100,000 oz.; ditto to New Orleans, 13,000 oz.—Silver bars to Calcutta, 7826 oz.

ORIGINAL CORRESPONDENCE.

COPPER SMELTING—PROTECTION OF THE MINER.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I beseech you to continue to investigate the subject of the standard of copper ore and the price of copper, and to insert your opinions in your paper. I do not think there is any subject so important to the miner, and I, therefore, again say that I beseech you to investigate. I am more than thankful for what you have done, and I believe that every miner in the United Kingdom is equally thankful, and is equally anxious to see your next investigation. We all beg that you will endeavour to ascertain if there is any just cause for the present low standard with the present price of copper. We are altogether ignorant on the subject—but we are not ignorant of the ruin which must follow such a standard. We, therefore, humbly call on you, and on the adventurers, and on copper-smiths, and on the public, collectively and individually, to come forward and see if something cannot be done for securing a fair price to the miner for his labour, and a satisfactory interest to the adventurer, and, at the same time, affording a liberal profit to the smelter. The miners, as a body, are anxiously waiting for your next labours in their behalf—among whom,

Redruth, Oct. 20.

A MINER.

[Some remarks upon our correspondent's letter will be found in another place. We have by no means lost sight of the subject.—Ed. M. J.]

LONDON AND WESTMINSTER BANK.

SIR,—Although my communication does not pertain to mining matters, yet the interest you manifest on all occasions, not only with reference to joint-stock banks, but to the commercial interest generally, induces me to address you, regretting that on the present occasion it should be in terms of complaint of an establishment which has my best wishes for its success.

It has too frequently occurred, not to become a matter of notoriety, that the office department of this establishment is anything but perfect. "Slow and sure" is a good maxim, and where sluggishness does not prevail, so as to interfere with business, more especially monetary operations, I am ever glad to see observed; but, Sir, as an instance of the slow operations of this establishment, I may state, that this day, in making a payment, by draft, I was detained upwards of a quarter of an hour, and on my expostulating on the want of attention, the observation was made by a gentleman present, that it frequently occurred a detention of twenty minutes to half an hour took place. There wants a system or method, for no such delays occur at banking-houses generally, while it detracts much from the value of the establishment, as time is money, and neither the one nor the other should be unnecessarily sacrificed.

Your obedient servant,

New Broad-street, Oct. 25.

H.

MUNSTER UNION MINING COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Your Journal being conducted upon principles avowedly for the benefit of the mining interest, no person will take umbrage at what is not offensively intended. Two or three notes, appended to certain mine reports, in your last Number, call upon me, as a matter of duty, to reply on the behalf of one of them, viz., the "Munster Union Mining Company." This mine was opened two years ago, and, after having worked for some time, the proprietors requiring additional capital, the mine was divided into 800 shares, and the public were invited to take part in it. For this purpose, the prospectus was published in your Journal about six months ago, and upwards of 600 shares having been taken up, there are no shares at present offering to the public. The calls required have been advertised in your Journal from time to time, and paid up, and the prospects of the mine are quite satisfactory. The respectability and competence of the directors are too well known to the shareholders to need any voucher on my part, and the communications of their agents were sent to the *Mining Journal* only for the purpose of making their shareholders, in distant parts of the country, acquainted with the progress of the works. Some of your readers object to mine reports altogether, but they, I presume, are not interested in any of them, and as you continue to deem them useful, I am sure that no sort of favouritism is to be looked for on your part. That a mine adventure is respectable, fairly conducted, and belonging to a public body of shareholders, is all that I presume can be necessary, to satisfy you as to the propriety of inserting their reports. This being matter for your own decision, I beg to conclude, what I trust you will not deem an intrusion.

And am, Sir, your obedient servant,

50, Threadneedle-street, Oct. 21. WM. TRINERY, Jun., Sec.

[The remarks made in our last Number, were intended to apply generally to companies which are not known in "the market," or as public companies. We were to insert all the reports forwarded to us, our columns would not afford space for other matter, more important, and of greater interest to our mining readers. We cannot permit the *Mining Journal* to be rendered the medium of advertising, or bringing into notice, undertakings, reports of which, we must repeat, appear to us occasionally to be manufactured, with the object of exciting the attention of the public.—Ed. M. J.]

COLLEGE FOR CIVIL ENGINEERS.

A general meeting of the promoters of this institution was held at their rooms, 58, Pall Mall, on Thursday, the 24th inst.

His Grace the DUKE OF BUCKLEUCH (President) in the chair.

The CHAIRMAN stated to the meeting that steps were being taken for the immediate securing of eligible premises in which to open the College, and that the services of men, eminent in various departments of science, were secured for the several Professorships of Mechanics, Mathematics, Architecture, &c.

Various measures for promoting the opening of the College with as little delay as possible were discussed and agreed upon, and the announcement made (among others) of the magnificent donation by His Grace, the President, of the sum of 1000l. to the funds of the institution, after which the meeting adjourned.

PRODUCE OF MINES IN RUSSIA.—An official account of the produce of the mines of gold, silver, and platinum in Russia, has been published at St. Petersburg; it embraces a period of sixteen years, from 1823 to 1838 inclusive, and shows the following result:—

PRODUCE OF THE IMPERIAL MINES.			
	Gold.	Silver.	Platina.
In Urals	1,524 pounds.	.....	29 pounds.
In Altai	834 " "	14,764 " "	.....
In Nertschinsk	92 " "	3,301 " "	.....
PRODUCE OF MINES BELONGING TO INDIVIDUALS.	2,009 " "	.....	1,209 " "
	3,524	18,065	1,209

Value in sterling about 12,000,000l. and 6,000,000l. During the same period the value of money coined at the Imperial Mint in St. Petersburg, from Russia and foreign bullion, was about 14,000,000l. in gold, 8,000,000l. in silver, and 100,000l. in platinum.

PROJECTED RAILWAY.—We understand that a company is about being formed for constructing a line of railway from London to Ramsgate, via Woolwich, Chatham, &c., with which Mr. G. Walter, formerly the managing director of the London and Greenwich Railway, is connected. We have seen a draft prospectus, and think the plan a feasible one, but we must enter our *velo* against interest being paid on the capital, otherwise than out of profits. The system is mischievous, and we are sorry to find it gaining ground.

METEOROLOGICAL JOURNAL, 1839.

Oct.	Thermometer.	Barometer.	Oct.	Thermometer.	Barometer.
Thurs. 17 from 32 to 54	29.97 to 29.98	Monday 21	49	29.95	30.12
Friday 18	47	Tuesday 22	50	30.05	30.04
Saturday 19	48	Wednesday 23	49	30.01	29.98
Sunday 20	32 .....	.....	.....	.....	.....

Winds, N.E. and N.W.

Except the 19th and 20th, generally cloudy; rain fell on the 18th, 23d, and following day.

Rain fallen, 15 of an inch.

Edinburgh.

CHARLES HENRY ADAMS.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMESHURST MINING COMPANY.

Stoke Newington, Oct. 21.—Hitchens' shaft is sunk to a depth of 19 fms. 3 ft., and ground as usual—the water still increasing. In the 100 fathom level, west of the engine-shaft, the lode is about nine inches wide, and in character as last reported. In the eighty fathom level, west of the engine-shaft, the lode appears more encouraging than for some time past, one foot wide, and worth about 8d. per fathom. In driving at this level, east of Snell's winze, the lode is still a good course of ore, two feet wide, and worth 40s. to 45s. per fathom. In driving the seventy fathom level, west of the engine-shaft, the lode is still favourable, about twenty inches wide, and worth from four to five tons per fathom. In the winze sinking below this level the lode has greatly improved, is at present fifteen inches wide, and worth from three to four tons per fathom. The lode in the stopes, in the back of this level, is about eighteen wide, and worth from three to four tons of good ore per fathom. In the sixty-two fathom level west, during the past week, we have met with another part of the cross-course, about six inches wide—in consequence of which we have not as yet discovered the lode. In driving east of the engine-shaft, at this level, the lode is about two and a half feet wide, composed of muddle, spar, and copper ore, with a kindly appearance. The lode in the stopes, at the back of the sixty-two fathom level, still continues an excellent course of ore, from two and a half to three feet wide, and worth about nine tons of good ore per fathom. The tribute pitches continue well. The sampling will commence to-morrow morning (22d inst.), as stated in my last, of about 170 tons, of superior quality ore to the last parcel.

ST. HILARY MINING COMPANY.

Oct. 19.—The eighty fathom level west is extended twenty fathoms through ore ground; the lode in the present end is ten inches wide, and worth from 8s. to 9s. per fathom; the ground we are driving for 3s. per fathom has risen in the back of this level four fathoms; the lode has been productive and very regular, and is now worth about 8s. per fathom—the ground can be expended at 3s. per fathom; this I hope will be communicated to the winze in the bottom of the seventy fathom level on Thursday next: the ground will set on tribute at 5s. in 20s. The eighty fathom level east is extended nineteen fathoms through a very kindly lode; the lode in the end is eighteen inches wide, composed of ore and spar—the greater part of the ore in the bottom part of the end; the lode is much improved during the week. In the seventy fathom level west the level has been driven through a good lode for thirty-seven fathoms; the ground in the back of this level has set at about 7s. 6d. in 20s. The lode at present is in two branches in the back of the level, but appears to be coming together in the bottom of the end; the branches are each about four inches wide, composed of spar and rich yellow ore. The ground at this level is hard, or we could have set the back of the level at a much lower tribute. We have sunk a winze two fathoms in the bottom of this level. In the twenty fathom level, west of engine-shaft, the lode is about ten inches wide, good yellow ore, worth about 9s. per fathom, and can be sunk at 3s. per fathom; this winze we should have sunk, but were prevented by the water until yesterday; they cut a hollow lode in the rise, which drained the winze quite dry, and nearly all this level. The seventy fathom level east is extended thirty-seven fathoms. We have had a good ore lode the last seven and a half fathoms we have driven; the lode was taken down yesterday—it is eighteen inches wide; it appears richer yellow ore; the lode was formerly composed of ore, black jack, and iron, but it appears to-day to be more kindly; the iron has disappeared—the lode now is composed of ore and white spar. In the western shaft, under the fifty fathom level, the lode is disordered, but I think it is highly necessary it should be sunk, as most of our ore and deads broken from the western part of the mine might be drawn at this shaft, and save the expense of wheeling. There has been no winze sunk through this ground for a great distance, and the additional price for carrying it the length and breadth of the shaft is very little. The cross-cut, at the sixty fathom level, is extended fifteen fathoms, to cut a south lode that was seen at the twenty fathom level. We expect soon to cut it, unless it has changed its underlay, which is not likely. We cut a branch this week that was cut at the twenty fathom level six feet before the south lode. This branch is considerably improved in size and appearance, which gives a hope that the south lode may be the same—the strata is light killas. We are certain that the ore we have had in the seventy has continued to the eighty fathom level. We have sunk two fathoms in the bottom of the seventy, and rose four fathoms in the back of the eighty fathom level, leaving but three fathoms to communicate—the lode continues its size; the ore is of equal, if not of better, quality, and we can at present drive or stop the ground for half the price we could in the levels above. We ought at this time to be sinking the engine-shaft, but it is impossible with the present engine. The ground in the shaft is not hard, provided we have an engine of sufficient power. Captain Sampson was underground with me yesterday; he could not have come in better time—the water was out. He could see for himself, and not be guided by reports. I sincerely hope his report will induce the shareholders to erect a new engine.

C. H. RICHARDS.

CORNUBIAN MINE.

Chiserton, Oct. 22.—Our sumpmen have commenced driving north and south to cut the lodes at the fifty fathom level. Our forty fathom level west is poor at present. The thirty-two fathom level, on south lode, is greatly improved since last report; we have a good lode in this level. The thirty-two fathom level west is driving north to get under the western shaft. We have holed the rise at the forty fathom level to the thirty-two fathom level; and we set last Friday four pitches in the back of the forty fathom level, and three in the back of the thirty-two fathom level—one at 36s., one at 40s., one at 50s., one at 60s., one at 100s., and two at 120s. per ton. We have now dressed fifty-seven tons, undressed nine tons, and broken underground four tons.

J. BOKLASE.

TRELEIGH CONSOLS MINING COMPANY.

Oct. 19.—We have driven the fifty fathom level west on Christie lode about two fathoms, where it has a good appearance, and is worth for copper about 6s. per fathom, and likely yet to improve. This level is driven east about ten feet, where the lode is at present disordered by a slide. We shall put the sumpmen to cut a pit next week, and prepare for sinking without loss of time. The forty west has a most promising appearance; is about three feet wide, composed of muddle and ore, emitting quantities of water. We have holed the winze to the forty east of the shaft. In this winze we have a good lode in each end, where we purpose setting a new pitch on survey day. At Shanger the south lode has a good appearance, and should think it will produce ore enough this month to pay for driving both ends. The north lode cannot be valued for ore, though it is kindly.

W. SINCOCK.

WEST WHEEL JEWELL MINING ASSOCIATION.

Oct. 21.—The men will begin to sink Buckingham's shaft under the forty-two fathom level in a few days. The forty-two fathom level east, on the south branch, is divided by a horse; it is nine or ten inches wide—ore on both sides worth 5s. per fathom. The thirty west, on south lode, is two feet wide, composed of good bunches of black and grey ore. Sinking the south adit shaft below the thirty the ground is more favourable. In the winze sinking on the south lode, under the twenty fathom level, the lode is much improved, being eighteen inches wide, a good bunch of ore, worth 10s. per fathom, leaving ground that will work at a low tribute. We have at surface about seventy tons of ore, worth from 450s. to 500s. As soon as our winzes are holed we shall be able to set some pitches at a low price, which will turn out a good deal of ore.

S. LEAN.

TRESTON MINING COMPANY.

St. Blazey, Oct. 21.—Last Friday being our setting-day, we set the same number of pitches that worked last month, for one month only. The lode in the twenty fathom level east is eighteen inches wide, good work of the kind, but not high priced ore, worth one and a half ton of ore per fathom, and in a 2 ft stratum of ground. The lode in the rise, in the back of this level, is nine inch-a big, ore, but rather poor. The lode in the rise, at the back of this level, is seven inches wide, with a little ore. We have stopped the cross-cut that was driving north at this level, the ground being so very hard; and if the ground should prove favourable, we shall drive north at the thirty fathom level. The lode in the ten fathom east is six inches big, very poor, but in a soft stratum of ground. The lode in the same level west is four inches wide, a kindly ore branch. We have set John's shaft to sink under the adit level. The price of the tribute and tallow you have in the setting-sheet.

P. CLYMO, Sen.

UNITED HILLS MINING COMPANY.

Oct. 22.—In the adit level driving east the lode is from six to seven feet wide, and much improved for ore since last reported. In the ten fathom level east the lode is much increased in size during the past week, although not producing much ore as yet; it has a very kindly appearance. In the twenty-seven fathom level the lode is 2 ft. 6 in. wide—one foot good for ore. In driving east, in the thirty-six fathom level from Turtan's shaft, the lode is three feet wide, with stones of ore. West of ditto the lode is 3 ft. 6 in. wide, with ore throughout. We are obliged to abandon the forty fathom level east and west of Webber's winze, in consequence of the water; also east from Nettie's winze. In driving west from Williams' shaft the lode is five feet wide—eighteen inches good ore. East of eastern shaft the lode is five feet wide, producing some good ore. In driving at the fifty fathom level the lode is about three feet wide—eighteen inches good ore. In the western end the lode is about four feet wide, a little improved for ore since our last.

C. PENROSE.

REDMOOR CONSOLIDATED MINING COMPANY.

Oct. 22.—Johnson's Flat-rod engine-shaft is sunk 9 fms. 2 ft. below the seventy fathom level; the lode here is about one foot big, good work for silver-lead ore; the ground continues much of the same nature as hitherto, hard, which renders it spare for sinking. The lode in the north end, at the seventy fathom level, has a kindly appearance, being from eight to ten inches in width, rich work for silver-lead—ground favourable for driving. In the sixty fathom level north the lode is about six inches wide, producing lead, but not rich. In reference to the tribute department, our pitches at this time are not presenting such a favourable aspect as seen in time past, consequently it is to be feared our next sampling will not exceed the last. At the north mine, in driving east and west on the copper lode, at the twenty fathom level, the lode in the east end is about one foot big, chiefly composed of muddle, capel, and spar, poor for copper—ground favourable; going west the lode is full two feet in width, being principally of muddle, spar, and copper, not rich of the latter, neither do we expect to see the lode productive at this depth, but judging from the present character of the lode, and the favourable strata of ground seen at this level, we are still of the opinion that this lode will prove productive as we proceed in depth. In the cross-cut driving south of the engine-shaft, at the twenty fathom level, we have not intersected any other lode since the one named in my last. Whether the ore already cut is the principal object remains to be proved—however, we hope shortly to ascertain the fact. On Saturday last we dropped the new list to the thirty fathom level, in the north engine-shaft, and have forked the water at that level, and shall be prepared to commence driving by the close of the present week.

S. HARRIS.

TINCROFT MINING COMPANY.

Oct. 16.—There has no particular alteration taken place in the lode in the engine-shaft since my last. We have now eight men sinking the shaft, and four men cutting ground for an angle bob, at the 132, and preparing for fixing lift, &c.; the shaft is still worth 40s. per cubic fathom. The lode in the 142 west is about three feet wide (beyond the cross-course), producing good work both for tin and copper ore. We have still a good branch of copper ore on the south part of the lode, in the 132 west, the north part being good saving work for tin. The lode in the 132 west is about 2 ft. 6 in. wide—six inches of which is rich for tin; this end is more promising than it has been for some time past. The east end, same level, the lode is three feet wide, good saving work for tin and copper ore for the whole width. The stopes in the back of the 110 are yielding excellent work for tin, rather improved since my last. We are now in course of raking down the lode in the 100 fathom level east, and I am glad to say we find that part we left by the side of the level to be four feet wide, good work for tin and copper ore, better than I expected it would be found. The ninety and eighty-one ends are both yielding good work for copper ore. The seventy two and fifty-eight ends are at present in unusually hard ground, and rather poor to what they have been. Our pitches both for tin and copper ore are on the whole looking better than when I wrote you last. We have this day sampled 139 tons of copper, and have now about fifty tons more at the surface, which we could not get about in time for to-day's sampling. Our new engine-shaft is sunk about fifteen fathoms; we are now about to fix a winze on it, hoping thereby to expedite the sinking. The engine-house is being got up as fast as can be expected, taking weather into account; it is now about eighteen feet from the surface, or nearly up half its height.

W. PAUL.

TAMAR SILVER-LEAD MINING COMPANY.

Oct. 21.—In going south, at the ninety-five fathom level, the lode has become much more promising, and having at length (to all appearances) got through the slide, we anticipate shortly getting into a good run of ore ground, judging from the very productive ground which we discovered in the levels above; the lode is now nearly two feet big, and ore. We are desuing the lode in the 125 fathom level going north. Not the slightest alteration has taken place since the date of my last report. Our tribute department remains much the same. The tributaries are working diligently, and I hope most of them are getting wages. We have sampled to-day two parcels of silver lead ore—No. 1, computed forty tons. No. 2, ditto eight ditto, for sale on Wednesday, the 30th inst., on the usual conditions.

MARK JAMES.

PERRAN CONSOLIDATED MINING COMPANY.

Oct. 19.—Windus's engine-shaft is sunk seven fathoms below the twenty-five fathom level; the ground there is of late improved. The lode in the twenty-five fathom level, going east, is about two feet wide, composed of black-jack, muddle, and lead—a promising level. In the fifteen fathom level, driving east, the lode is four feet wide, about one foot of which is a rich leader of lead ore; we have driven through a rich lode here for about six fathoms in length, during the last three weeks. Our tributaries are still raising a fair quantity of ore, and the prospects of the mine, altogether, are raising to be in an improving state. We sampled last Monday, the 14th instant, computed forty tons of lead ore.

R. ROWE.

POLBRIKEN MINING COMPANY.

Oct. 18.—We have driven east of Flat-rod engine-shaft, on Dorcas's lode, at the thirty-two fathom level, about three fathoms, and have cut the cross-course; the lode continues small, but contains a little tin. We have now set to drive south further, to cut Bowl and Butt's lode, and expect to drive about three or four fathoms before we intersect that object. At the twenty-two fathom level, east of engine-shaft, Dorcas's lode is two feet wide, the whole of which is producing good work, and in the back of this level we have set a pitch at 6s. 8d. out of the 11. The eastern shaft, sinking from adit on this level, denominated Rowe's shaft, the ground is moderate for sinking, and no doubt this shaft will be sunk rapidly, and not expensive, which is important for the future working of this mine, particularly as our prospects are very encouraging in this direction. We have set to day ten pitches, varying from 6s. 8d. to 13s. 4d. out of the 11.

R. ROWE.

CORNISH VITAL STATISTICS AND POLYTECHNIC SOCIETY.

TO THE EDITOR OF THE CORNWALL GAZETTE.

SIR,—It is greatly to be desired that Sir Charles Lemon's "Reflections on the Health of the Cornish Miners," published in your paper of Friday week, may effect the object of the philanthropic author—and induce increased exertion in behalf of our mining population. Sir Charles shows that, while Cornwall ranks considerably above the average of England in point of longevity, it has considerably more than an average of fatal cases of diseases of the chest; and it has been shown in the tables which Sir Charles does me the honour to quote, that these diseases abound in the mining districts to an extent immensely above even the Cornish average, the unavoidable conclusion is that the occupations of the Cornish miners have a peculiar tendency to produce such diseases. This appears sufficiently clear, and some idea of the extent of the mischief may be found from the fact that in a comparison of the longevity of a mining parish, with that of a parish in which no miners reside, which were both rural parishes, and very similar in respect of soil and climate, I have found the difference (in round numbers) to the disadvantage of the mining parish, in the number of males,

reaching the age of 80 as	3 to 9
" 70 as	8 to 25
" 60 as	16 to 28
" 50 as	26 to 37

the disparity continuing to decrease down to the age of thirty, when it begins to be in favour of the mining parish. That the cause of this great difference in the longevity of these parishes is the occupations of a majority of their male inhabitants, and not any difference of climate, as Sir Charles also shows, is proved by the fact that children, at the ages most susceptible of any deleterious influences of climate, die in as few numbers in this mining parish as in some of the most healthful parishes in the county. On comparing the female longevity of these parishes, I found much less disparity than in that of the males, although, as is well known, the occupations of large numbers of females in mining neighbourhoods is also extremely injurious to health.

That the occupation of the Cornish miner greatly shortens his life, and that it does so, especially, by producing diseases of the thoracic viscera, there can be no doubt. But that this is so exclusively referable as Sir C. Lemon seems inclined to believe to the manner in which our miners ascend the mines, I venture with all deference to say there may be very great doubt. I was inclined to think that the utterly insufficient ventilation of our mines is an equally important agent in producing these diseases. If my information be correct, the evil of defective ventilation, from the nature of the strata, and the peculiar modes of working, exists in our copper mines to a greater extent than in the mines of any other part of England. I believe the coal mines, in the districts mentioned in Sir Charles Lemon's paper, are, in general, very perfectly ventilated, especially in the parts where the miners are at work. The Cornish mines, on the contrary, are, in general, very imperfectly ventilated, especially in the "ends" and backs of levels, where the miners are principally employed. The Cornish miner frequently crawls to his work through passages so narrow, and so low, as under any circumstances would seriously impede the ventilation. He frequently works six or eight hours a day, in places where he cannot stand upright—where the free use of his limbs, and the expansion of his chest are alike prevented—in an excavation so small that the mere bulk of the men employed in it produces a serious diminution of the quantity of air it will contain, while the quality of the little air they get is deteriorated, in all cases, by the breathing of the men, and the combustion of their candles—and, perhaps, in a majority of cases, by frequent explosions of gunpowder, and the natural disengagement of noxious gases.

The existence, extent, and principal causes of the mischief, have been shown, but the question remains—how is the evil to be remedied? how are

the mines to be better ventilated? and how is the exhausted miner to be saved the prodigious labour of ascent? For effecting both these objects some very ingenious plans have been proposed to the Polytechnic Society, but as yet, it is to be lamented, with very unimportant results. Notwithstanding the magnificent proposals, made by wealthy individuals, for carrying into effect a plan, approved by the society, for the ascent of miners, I believe nothing in that way has been yet attempted. How is it that, where the evil is so evident, and so extensive—while, on the average, the miner's life is shortened full twenty years by his occupation—nothing has been done for his relief? It were a libel on the benevolence of the county to attribute this result to any indifference to the welfare of the miner. I fear it may more correctly be considered the consequence of some distrust of the opinions of the judges appointed by the society. I am quite aware that a disappointed candidate is apt to be wrongly impressed on this subject. That one who has to console himself with the assurance, which such an individual, perhaps, always has, that his plan is the one which must, after all, be adopted, is apt to wish an opinion to be correct, before he has sufficient reason to believe it so. But I believe I am the subject of no wrong impression, nor of any prejudice in thinking that such a distrust does extensively exist. A plan was found to be in operation in the Hartz mines, which was stated to answer all the purposes desired. Now it has been thought by many that if it answered so well, nothing more was required than to introduce this very plan, without inviting competition in the proposal of others. But the very obvious answer was at hand. It was desirable to see if the objects proposed could not be effected in some better way. But then comes the cause of the distrust I allude to—the enchantments of the Brocken seem to have had an extraordinary influence on the minds of the judges. Whatever plan has not had its archetype in the Hartz mountains has had no merit in their view. The Germans have tried a plan, and although we want a better, it must be constructed on the same principle. That plan which has come the nearest to the German plan has always been the one which the judges have been the readiest to patronize. Sir Charles informs us, and he seems to approve of the plan, that the miners in the north ascend and descend in buckets. One of the witnesses examined by the House of Commons' committee on mine accidents, stated that it was considered safe, where the carriages, or "corves" are made to run in grooves, to pass up and down at the speed of 100 fathoms in two minutes. We have here a steady motion, and sufficient rapidity; and if, in addition, a plan could be suggested to prevent the fall of the bucket in case of the breaking of the rope or chain, one would think the objects of the philanthropist as effectually secured as they could be by the more cumbersome, and expensive machinery of the German rods, and platforms. No improvement, however, on the English plan has been approved; while almost every year a premium has been adjudged to some new and equal impracticable modification of the other. These remarks are by no means made with a view of casting blame on the judges; their predilections may have taken an unfortunate German twist, but I am very far from thinking that they have not been actuated by a sincere desire to promote the objects of the invaluable institution which appointed them, and the benevolent individuals by whom the premiums have been offered. My object is, rather, to suggest the propriety of trying whether any other, and less expensive plan would find more favour with the mining public. I believe, however, that until some plan has actually been seen in operation, the matter will not be taken up by the public with the spirit necessary to carry it into effect to any very useful extent. Perhaps an effectual way of calling public attention to the subject would be to institute a series of experiments, to be made on the mines, and on a scale sufficiently large to allow the labouring miner to test the comparative convenience, and judge of the comparative security of the plans; experiments not confined to the rod principle; but admitting the competition of the safety bucket, with cogs, and with spring catches, and in short any other plan in behalf of which a reasonable ground to expect a good result could be shown. And, perhaps, the same ladies and gentlemen who have in vain offered their generous assistance to carry a single plan into effect, would have no objection to aid in trying these experiments on various plans.

But when this object shall have been attained, and the miner shall no longer have to encounter the painful ascent with which he now concludes his labour, the work of the philanthropist will be only half accomplished, unless a better ventilation of the mines be also obtained. It will be vain to hope that bringing the miner to the surface without any exertion of his own, will, of itself, be sufficient to obviate his peculiar tendency to disease and premature death. A better ventilation is imperatively called for, and the attention of our scientific men should be more directed to that subject. Previous to the last Polytechnic exhibition, I was shown a proposition for ventilating mines by means of fires—the furnaces for which were so contrived as to draw the air necessary for combustion from the places where the men were at work. A sketch of the plan was sent to the society, but, either from its demerit, or informality, was never noticed. A plan of a somewhat similar kind (I speak from memory) was afterwards proposed by Mr. Moyle, I think, at the annual meeting of the Royal Institution. It was in fact a modification of the plan on which our principal coal mines are ventilated, adapted to the peculiarities of Cornish mines. The plan appeared a very plausible, and comparatively inexpensive one, and I am sorry no notice has been taken of it; or, at least, that no plan considered sufficiently practicable has been proposed.

I beg, Sir, in conclusion, to apologise for the length to which I have intruded on your columns. The interest I take in whatever concerns the meritorious labouring population in the midst of which I live, would not allow me to pass unnoticed, an implied opinion, coming from so high a quarter, that to save the miner his present labour of leaving work was the only thing wanting to remove his peculiar tendency to diseases of the chest. I hope I have been guilty of no presumption in making these remarks; and if I shall have aided, in ever so small a degree, to fix the attention of the public on the sufferings of a large portion of my poorer neighbours, I shall have gained the principal object I have had in committing these remarks to paper.

I remain, Sir, very respectfully yours,

ROBERT BLEE, Jun.

Redruth.

TO MR. ROBERT BLEE, JUN.

SIR,—I have read with considerable interest your communication on the "Vital Statistics of Cornwall," which does honour to both your head and heart. Sir Charles Lemon describes the premature decay of our mining population solely to the physical injury sustained in ascending and descending our mines, whilst you, in addition, very justly, I conceive, consider that an equal amount is inflicted by bad air. Another striking fact which you adduce, and to which neither of the above causes conduce, is also the unusual female mortality in our Cornish mining localities. We all know they do not labour underground. A third cause, I am strongly inclined to believe, of the frightful mortality, as compared with the Staffordshire or Welsh colliers—the lead miners of Derbyshire and Northumberland, &c., may be ascribed to deficiency of food, arising from irregularity and inadequacy of wages. This, I believe, has been alluded to, both by Lanyon and Carlyon. In passing the different groups, or "pairs" of these haggard, worn-down men, on our roads and thoroughfares, the impression which irresistibly forces itself upon the mind of the observer, from their physical appearance, is, that their nourishment must be either insufficient in quantity, or unwholesome in quality, or both; or, in common language, that they do not get a "belly full."—You, Sir, reside at Redruth, which may be considered the centre of one of our most important and extensive county mining districts, and I shall, therefore, feel much obliged if you will, through the medium of the columns of this respectable journal, favour me with a statement of the range of miners and mine labourers' wages in your neighbourhood, social and domestic habits, &c., as bearing upon their general health.

Yours, truly,

HUMANITAS.

THE EFFECTS OF THE STEAM-ENGINE.—If the contrivances by which this vast power is brought to bear on the arts and manufactures be rendered attractive by their great mechanical beauty, how much more imposing will the subject become when the effects which the steam-engine has produced upon the well-being of the human race are considered! It has penetrated the crust of the earth, and drawn from beneath it boundless treasures of mineral wealth, which, without its aid, would have been rendered inaccessible; it has drawn up, in measureless quantity, the fuel on which its own life and activity depend; it has relieved men from their most slavish toils, and reduced labour in a great degree to light and easy superintendence. To enumerate its present effects, would be to count almost every comfort and every luxury of life. It has increased the sum of human happiness, not only by calling new pleasures into existence, but by so cheapening former enjoyments as to render them attainable by those who before could never have hoped to share them; the surface of the land, and the face of the waters, are traversed with equal facility by its power; and by thus stimulating and facilitating the intercourse of nation with nation, and the commerce of people with people, it has knit together remote countries by bonds of amity not likely to be broken. Streams of knowledge and information are kept flowing between distant centres of population, those more advanced diffusing civilisation and improvement among those that are more backward. The press itself, to which mankind owes in so large a degree the rapidity of their improvement in modern times, has had its power and influence increased in a manifold ratio by its union with the steam-engine. It is thus that literature is cheapened, and, by being cheapened, diffused; it is thus that reason has taken the place of force, and the pen has superseded the sword; it is thus that war has almost ceased upon the earth, and that the differences which inevitably arise between people and people are for the most part adjusted by peaceful negotiation.—*The Steam-Engine Familiarly Explained, by Dr. Lardner.*

NEW COMPANIES

Under this head we propose to notice weekly the several new projects which may be brought forward, and to which public attention is directed, through the medium of the press or otherwise, confining ourselves, however, to "Public Companies," and briefly noticing their objects with such general information as is conveyed by the prospectuses, or which may be gathered from other sources, on which reliance may be placed. We shall, therefore, feel at all times obliged for particulars duly authenticated, on subject of projected companies; and while it will be our object to avoid the exercise of bias in favour of any particular undertaking, we shall at the same time endeavour to collate such information as is calculated to afford to the capitalist the opportunity of judging of its merits, and the correctness of the opinions put forward in the representations of the projectors.

RECENT DECREE OF THE CONGRESS OF NEW GRANADA.

According to a decree of the Congress of New Granada, in 1835, Porto-bello and Panama were to be declared free ports for twenty years, so soon as a communication should be opened between the Atlantic and Pacific Oceans, from one of those places to the other, either by canal or by railroad. As these enterprises, so often announced, and for which special privileges were conceded to various companies and individuals, have never been carried into effect, nor even commenced, another decree was passed in May last, importing that until the realisation of the project referred to the port of Panama is to possess for four years the following privileges:—All national and foreign vessels of friendly and neutral states are to be exempted from payment of any duties of anchorage, tonnage, or other duties usually received on their entry and anchorage. The agricultural produce of the republics of the Ecuador, Peru, Mexico, and Central America, the importation of which is permitted into New Granada, are not to be subject to any duties of import, excise, or roads. Gold in the shape of dust, paste, or manufactured, and silver in bars, pigs, or manufactured, are not to be liable to any export duty, provided they are the produce of the Isthmus, or imported from abroad. National and foreign vessels which enter the port of Panama may proceed to take in fresh water and provisions at the island of Taboga, for which the necessary precautions will be adopted at the Custom-house. Portobello is declared a port of call for all national and foreign merchandise, according to the regulations established by the decree of April 4, 1836. The port of Buenaventura, on the coast of the Pacific, is declared a free port for the space of forty years, with the right of free entry and departure of national and foreign vessels of every kind, without payment of any import duties, or of any other charge of whatever kind. No exception is made except for the vessels of nations at war with New Granada. This privilege extends only to the port and inhabitants of Buenaventura; all the merchandise exported for other parts of the republic thence, by sea or by land, are to be subject to the payment of the national duties.

It will be observed that for some time past the Government of New Granada have been wisely rendering their commercial legislation more liberal. The present measures seem much better adapted to realise the great and desirable enterprise of a canal or railroad communication across the Isthmus by national enterprise at home, than by trusting to the speculations of capitalists abroad. These commercial privileges will serve to attract commerce, and therefore introduce and increase capital in the country itself, which in the natural course of things must lead to its application to this and all other sorts of internal and beneficial improvement.

MILLER'S PATENT FIRE BARS.

A patent has been taken out for a new fire-bar, which promises to be a great improvement on any yet in use, and is suited not only to the common steam-engine furnaces, but can with equal facility be applied to the furnaces of marine engines, and the locomotive engines of railways, &c. The principle of the invention consists in moving each alternate bar longitudinally in one direction, whilst the intermediate bars are moved in the opposite one. This movement, aided by the channelled surface of the bars, breaks up the clinkers the instant they are formed, or prevents their formation, and thus keeps the air-way perfectly free. Considerable attention has from time to time been paid to the improvement of the fire-bar, now become of so much importance to the manufacturing community, by men eminently qualified, and several patents have been obtained for this purpose, all of which have been very considerable improvements over the ordinary fire-bar. The object of the inventor not being always the same, has produced a great variety of plans, which have had more or less merit. Branton and also Steel, with a view to an equal distribution of the fire, made the grate itself revolve; others have simply moved the fire bars, with the intention of preventing the adhesion of clinkers, and the consequent obstruction of the air-way. This is the object of Miller's patent, which, being simple in its principle, of easy construction, not requiring extraordinary strength, and, consequently, no increased weight of metal, the object is attained with little increased expense over the ordinary fire-bar. The advantages it secures are very considerable; for not only, by the perfect freedom from all obstruction of the air-way, is the combustion of the fuel and its heating-power considerably increased, but coal of an inferior quality can be used without the usual effect of choking up the grate. By the vigorous combustion which this grate insures, it prevents large masses of coal from passing away unconsumed in the form of smoke, and consequently must effect a considerable saving in fuel. The ingenious patentee is the chief engineer of the extensive works of Messrs. Thomson, Brothers, and Sons, Primrose, near Clitheroe, where these bars have been for some time at work, and have fully realised the expectations of the inventor.—*Manchester Guar.*

BRUSSELS, OCT. 18.—The *Commerce Belge* says—We can assure our readers that the sale of the establishment at Seraing is decided on, and will take place on the 1st of March next year. It will be put up at 10,000,000 francs. This assurance on our part is a sufficient answer to the journals which have announced the sale of the manufactory as having already taken place. It is very probable that so experienced a man as John Cockerill may have been able to insure the realisation of so important a sale at a fixed price, reserving to himself the chance of obtaining a higher offer by public sale. It is nevertheless true, that the sale will be public, that moneyed men and companies, and Government itself, will have an opportunity of entering into competition with a foreign bidder.

IMPERIAL BANK OF MANCHESTER.—The solicitors for the claimants request the attendance of the original shareholders at the York Hotel, Manchester, on Monday next, when several propositions which, it is considered, will conduce to the arrangement of the affairs of the bank, will be submitted.

VOLCANIC MATTER.—The greatest part of the coast south-west of Aetna consists of lava, which, in times long anterior to all historical records, ran down its sides. The dates of only two of the eruptions which produced the lava are known—that of the 96th Olympiad, and another 122 years before Christ. Recupero, the Sicilian topographer and historian, estimates the volcanic matter ejected in the eruption of 1669 (a memorable one indeed) at 94,000,000 of cubic passi (a passi is five feet) equal to 11,750,000,000 cubic feet. Now that mass of solid matter would build a dozen such cities as London, supposing it to consist of 208,000 houses, and each house to contain 5000 cubic feet of walls. This same eruption of 1669 destroyed the habitations of 27,000 people.—*Simon's Tour in Sicily.*

HETTON COLLIERY.—The average rate of wages at the Hetton colliery are, hewers 3s. 9d., putters 3s. 9d., bankmen 4s. 7d., waggons 3s. 6d., enginemen 3s. 4d., masons 3s. 5d., smiths 3s. 2d., per day, with house, firing, and gardens in addition; the hewers for six, and all the others for twelve hours per day.

THE "BRITISH QUEEN" STEAM-SHIP.—Previous to the *British Queen* leaving New York the engineer detected several pieces of iron put into the machinery by some evil-disposed person, which would have caused extensive destruction had the discovery not been made in time. This should be a warning to all engineers to examine their machinery carefully whenever they have been in a position admitting of the possibility of malicious persons having access to their vessels. The officers of the *British Queen* have not been able to fix suspicion on any particular party.

MERSEY TUNNEL.—Last week a meeting was held at Liverpool, for the purpose of forming a company to undertake to make a tunnel under the Mersey, to connect Liverpool with the Cheshire side of the river. Mr. Stevenson, Mr. Vignoles, and other eminent engineers, declared the undertaking practicable.

ACROBA BOREALIS.—An aurora borealis of considerable extent was perceived at Douai on the 16th inst., at half-past six in the evening. As the night advanced the effect became so strong that the town was quite illuminated.

MACHINE FOR PROPPELLING CARRIAGES.—We understand that Mr. Boydell, who has a patent for an improved method of propelling carriages, will, at the request of some of the Staffordshire ironmasters, exhibit a machine propelled by manual power, on the 29th of this month, at the Himley Arms, Himley. Some time ago he made several experiments in the neighbourhood of Chester, when he showed the power of the principle, by propelling several carts attached to the machine, and seventy persons riding, by one man's power, for a short distance, at the rate of half a mile an hour; a carriage itself, with two men working, at the rate of eight miles an hour; and one carriage attached, with seven persons riding, at the rate of about six miles an hour. By steam power there is no doubt any speed may be obtained, or any weight of load pulled forward, and it is confidently hoped that this principle of movement will do away with the necessity of making railroads only upon nearly a level, and that the same power which is now used to propel carriages on railways will take them up any inclination not exceeding 1 in 30.—*Wolverhampton Chronicle.*

PRICES OF SHARES AT LIVERPOOL.

WEDNESDAY, OCTOBER 23.

Mines.	Total.	Price.	Amount.	Total amount.
Liverp. & Manch. Railway	100	100	100	100
Ditto Quarters	25	46 10 0	1150	1150
Ditto New Halves	40	80 0 0	3200	3200
Bolton and Leigh ditto	100	61 0 0	6100	6100
Birmingham & Gloucester	50	38 10 0	1925	1925
Birmingham and Derby	50	46 10 0	2310	2310
Chester and Birkenhead	25	42 10 0	1050	1050
Chester and Crewe	25	31 0 0	775	775
Eastern Counties	18	7 10 0	126	126
Edinburgh and Glasgow	20	13 10 0	270	270
Glasg., Paisley, & Greenock	14	12 10 0	169	169
Ditto, Kilmarnock, & Ayr	15	11 0 0	165	165
Grand Junction ditto	100	201 0 0	20100	20100
Ditto Half shares	200	73 0 0	14600	14600
Great Western Railway	65	62 0 0	4030	4030
Ditto new	10	9 17 6	96	96
Kenyon and Leigh ditto	100	10 0 0	1000	1000
Leicester & Swanning	30	71 0 0	2130	2130
New shares	30	49 10 0	1485	1485
London and Birmingham	30	140 0 0	4200	4200
Quarter shares	5	21 10 0	105	105
Ditto new shares	16	31 0 0	496	496
London and Brighton	30	17 2 6	518	518
London and South Westn.	50	39 10 0	1975	1975
Manchester & Birmingham	25	16 10 0	400	400
Ditto Extension	7	6 10 0	42	42
Leeds and Manchester	60	67 0 0	4020	4020
Manchester, Bolton, & Bury	80	36 10 0	2928	2928
Railway and Canal	80	37 0 0	2960	2960
Midland Counties	80	37 0 0	2960	2960
North Midland ditto	85	81 0 0	6885	6885
North Union	100	61 0 0	6100	6100
Newcastle and Carlisle	100	99 0 0	9900	9900
Ditto Quarter shares	25	24 3 0	607	607
South Eastern	12	12 0 0	144	144
St. Helens & Runcorn Gap	100	10 0 0	1000	1000
Ulster	3	7 0 0	21	21
Wigan Branch ditto	100	10 0 0	1000	1000
Warrington & Newton	100	10 0 0	1000	1000
York and North Midland	30	37 0 0	1110	1110
Albion	25	22 2 6	556	556
Bank of Liverpool	125	21 10 0	2637	2637
Borough Bank	10	14 7 6	147	147
Commercial Bank of Liver.	10	18 10 0	181	181
Commercial Bank of Engl.	3	4 1 0	12	12
East of England Bank	10	9 7 6	97	97
Liverpool Banking	10	9 3 0	93	93
Union Bank of Liverpool	10	13 2 6	132	132
Bank of Manchester	10	13 7 6	137	137
Royal Rock Ferry	20	5 0 0	100	100
Monk's (Woodside)	17	7 5 0	127	127
Manchester & L'pool Dist.	15	11 2 0	168	168
Northern Central Bank	10	3 7 6	37	37
North & South Wales Bank	10	8 3 0	83	83
Royal Bank of Liverpool	500	710 0 0	355000	355000
South Lancashire Bank	24	6 7 6	162	162
Wills and Dorset Bank	74	7 2 6	537	537
Liverp. Marine Assur. Co.	25	4 10 0	102	102
Ocean Assurance Company	10	6 7 6	67	67
Liverp. & Har. W. Work	400	457 0 0	182800	182800
Boole ditto	327	10 0 0	3270	3270
Liverpool Coal Gas	370	0 0 0	0	0
Liverpool New Gas & Coke	100	197 0 0	19700	19700
Exchange Buildings	100	164 0 0	16400	16400

PURCHASES OF COPPER ORES AT SWANSEA,

OCTOBER 16.

Purchasers.	Mines.	Total.	Price.	Amount.	Total amount.
1. FREEMAN and Co.	Knockmahon	100	10 11 0	1110	1110
2. SIMS, WILLIAMS, NEVILLE, and Co.	Chill	8	44 4 6	355 6 0	355 6 0
	Doigley	7	19 14 6	135 1 6	135 1 6
	Doigley	16	3 19 0	63 4 0	63 4 0
	Doigley	3	7 6 6	21 9 6	21 9 6
3. VIVIAN and Sons.	Cobre	95	15 4 0	1444 0 0	1444 0 0
	Chill	91	14 3 0	1287 13 0	1287 13 0
	Chill	68	14 3 0	972 4 0	972 4 0
	Chill	27	18 2 0	489 14 0	489 14 0
	Chill	94	14 10 0	1336 0 0	1336 0 0
	Chill	95	15 2 0	1434 10 0	1434 10 0
	Chill	19	14 0 0	266 0 0	266 0 0
	Chill	273	2 5 0	617 6 0	617 6 0
	Chill	114	15 3 0	1727 2 0	1727 2 0
	Chill	58	15 0 0	870 0 0	870 0 0
	Chill	102	9 18 0	1809 16 0	1809 16 0
4. WILLIAMS and Co.	Cobre	7904	18 12 0	14359 12 0	14359 12 0
	Tigrony	95	4 18 0	465 10 0	465 10 0
	Chill	93	4 8 0	409 4 0	409 4 0
	Chill	273	2 5 0	617 6 0	617 6 0
	Chill	32	4 8 0	228 16 0	228 16 0
	Chill	86	4 14 0	404 4 0	404 4 0
	Chill	32	3 9 0	90 0 0	90 0 0
	Chill	80	17 7 0	1474 10 0	1474 10 0
	Chill	26	17 11 0	631 16 0	631 16 0
	Chill	15	17 3 0	257 5 0	257 5 0
	Chill	22	17 11 0	386 2 0	386 2 0
	Chill	62	8 16 0	545 12 0	545 12 0
	Chill	123	1 19 0	239 17 6	239 17 6
	Chill	33	2 11 0	135 3 0	135 3 0
	Chill	43	2 14 0	117 3 6	117 3 6
	Chill	102	2 15 6	281 1 0	281 1 0
	Parys Mine	9994	18 12 0	18094 16 0	18094 16 0
	Parys Mine	1931	18 12 0	35000 0 0	35000 0 0

SALE OF COPPER ORES AT TRURO.

Sampled Oct. 9, and sold at Farquarson's Hotel, Truro, Oct. 24.

Mines.	Total.	Price.	Amount.	Total amount.
United Mines	125	4 0 6	507 5 0	507 5 0
ditto	102	8 5 6	865 12 0	865 12 0
ditto	101	8 5 6	865 12 0	865 12 0
ditto	100	5 4 6	546 0 0	546 0 0
ditto	98	8 5 6	836 12 0	836 12 0
ditto	96	7 3 0	694 8 0	694 8 0
ditto	84	4 13 6	355 2 0	355 2 0
ditto	82	8 4 6	685 12 0	685 12 0
ditto	79	9 14 6	701 12 0	701 12 0
ditto	78	7 9 0	622 0 0	622 0 0
ditto	77	4 19 0	308 12 0	308 12 0
ditto	69	7 10 0	483 0 0	483 0 0
ditto	67	5 6 0	378 0 0	378 0 0
Consols.	102	7 10 0	714 0 0	714 0 0
ditto	99	5 3 0	524 7 0	524 7 0
ditto	95	9 1 0	855 0 0	855 0 0
ditto	80	4 5 6	364 8 0	364 8 0
ditto	88	3 15 6	273 12 0	273 12 0
ditto	78	4 17 6	335 12 0	335 12 0
ditto	79	9 8 6	701 12 0	701 12 0
ditto	78	8 4 0	652 0 0	652 0 0
ditto	77	4 2 6	310 8 0	310 8 0
ditto	80	4 3 6	336 0 0	336 0 0
ditto	87	2 8 6	237 12 0	237 12 0
ditto	60	2 15 6	153 12 0	153 12 0
ditto	58	5 6 0	336 0 0	336 0 0
ditto	45	4 9 0	405 0 0	405 0 0
ditto	43	2 11 0	135 3 0	135 3 0
ditto	36	2 17 6	248 16 0	248 16 0
Gl. St. Geo.	11	4 3 0	47 10 0	47 10 0
ditto	96	5 16 6	515 12 0	515 12 0
ditto	55	5 6 0	330 0 0	330 0 0
ditto	93	4 6 0	414 0 0	414 0 0
ditto	88	5 12 0	458 0 0	458 0 0
ditto	79	3 11 6	266 12 0	266 12 0
ditto	47	3 3 6	156 0 0	156 0 0
ditto	45	2 15 0	112 10 0	112 10 0
ditto	38	3 4 0	129 2 0	129 2 0
ditto	88	7 12 0	622 0 0	622 0 0
ditto	57	3 14 6	245 12 0	245 12 0
ditto	38	11 7 6	426 12 0	426 12 0
ditto	63	3 3 0	207 0 0	207 0 0
ditto	55	4 5 6	230 12 0	230 12 0
ditto	40	5 6 0	240 0 0	240 0 0
ditto	15	4 13 6	101 12 0	101 12 0
ditto	3	11 13 0	33 10 0	33 10 0
ditto	67	5 12 6	336 12 0	336 12 0
ditto	61	3 10 0	186 0 0	186 0 0
ditto	39	2 11 6	84 12 0	84 12 0
ditto	75	2 11 6	84 12 0	84 12 0
ditto	62	3 6 0	198 0 0	198 0 0
ditto	79	6 3 0	486 0 0	486 0 0
ditto	34	5 18 0	214 8 0	214 8 0
ditto	38	4 19 0	151 2 0	151 2 0
ditto	28	4 3 6	120 12 0	120 12 0
ditto	50	6 7 6	338 10 0	338 10 0
ditto	18	2 14 0	117 3 6	117 3 6

TOTAL PRODUCE.

United Mines	1145	£706	2 6	Gl. Wh. Charlotte	180	£781	5 0
Consolidated	714	3783	2 6	Treleigh Consols	170	791	0 0
Gl. St. George	489	1431	0 0	Wheal Curtis	137	479	17 0
Fowey Consols	1243	1799	14 0	South Caradon	119	680	6 0
Hallensbengle	200	544	16 0	Wheal Perran	81	375	0 0
Godolphin	184	1336	2 0	Wheal Leeds	63	353	17 0
Average standard, 1021 7s.—Average produce, 8s.—Average price, 51s. 6d.—Quantity of ore, 3634.—Quantity of fine copper, 250 tons 12 cwt.—Amount of money, 20,688 <i>l.</i> 19 <i>s.</i> 6 <i>d.</i> —Average standard of last sale, 1011 7 <i>s.</i> 10 <i>d.</i> —Produce, 8 <i>s.</i>							
Copper ore for sale on Thursday next, at Andrew's Hotel, Redruth. Mines and works.—Consols, 771; North Roskar, 536; South Roskar and Wheal Chance, 7 <i>s.</i> ; United Hills, 351; East Wheal Crofty and Longcross, 35 <i>s.</i> ; Dolcoath, 394; Lower Consols, 222; Wheal Lydia and South Towan, 164; Tincroft 159; Wheal Pyran, 116; South Wheal Bassett, 108; Trevel, 90; East Crinnis, 61; Wheal Lysney, 21; Wheal Sparrow, 8 <i>s.</i> —Total, 2618.							

PRICES OF SHARE.

JOINT STOCK BANKS

No. of Shares.	NAME OF COMPANY.	Amount of Shares.	Amount paid up.	Per Share.	Total paid up.	Date of Issue.
25,000	Agric. & Com. of Irel.	25	10	..	..	Jan.
5,000	Australasia	40	84	83	8	Feb.
1,500,000	Bank of Scotland ..	10	804	172	210	Mar.
10,000	Birmingham Bank ..	100	160	228	10	Dec.
50,000	British Lloyds Co.	100	160	228	10	Mar.
20,000	British North Amer.	50	25	284	6	Dec.
100,000	Commercial	5	5	84	7	Jan.
20,000	Colonial	160	25	29	5	Jan.
5,000	Devon and Cornwall ..	105	25	45	8	..
3,000	Equitable Loan Co. ....	..	9	10	..	..
10,000	Foreign Banking Co. ....	..	3	9	..	..
2,000,000	Glasgow Union	250	50	65	7	Dec.
10,000	Gloucestershire	50	10	25	10	Feb.
5,000	Hampshire	50	2	..	10	..
10,000	Hibernian	100	25	..	10	..
5,000	Devon & Cornwall	100	20	30	..	..
20,000	London & Westmins.	20	20	215	5	Mar.
3,000	Lancaster	100	20	..	10	..
25,000	Liverpool	100	10	283	10	July
60,000	Land Joint Stock Co.	50	10	127	5	June
50,000	Manch. & Lincs. Dis.	100	15	12	75	Jan.
20,000	Manchester	100	25	27	75	Oct.
20,000	Monm. & Glamorg.	20	10	16	10	..

20,000	Natl. Bank of Ireland	30	174	19
10,000	Nat. Provinci. Engl.	100	35	84

10,000	Ditto New	20	10	172	5	Dec.
20,000	Nor.&Cant.B.ofEng.	10	10	3	5	Dec.
20,000	North Wilts.	25	5	102	8	July
20,000	Trov. Hk. of Ireland	100	25	441	8	July
4,000	Ditto New	20	10	172	5	Dec.
2,600,000	Koya	100	100	165	6	Dec.
7,000	South African	20	5	5	5	July
20,000	S. of Ireland, Cork.	25	5	5	5	July
4,000,000	Western of Scotland	200	40	—	—	—
20,000	W. of Eng. & S.W. Dis	20	124	12	5	—
20,000	Wilts and Dorset	15	74	74	5	—
GAS LIGHT AND COKE COMPANIES						
10,000	Alliance	10	5	—	—	—
2,500	Bath	20	16	22	3	Sept.
600	Bradford	25	25	—	10	Nov.
5,000	British	40	18	21	14	May
5,000	Do. Provincial	20	19	25	14	Nov.
925	Birmingham	774	50	53	74	July
2,400	Birm. & Staffordshire	50	50	18	4	Sept.
600	Bradford	50	50	28	73	April
4,250	Bristol	20	26	26	2	Feb.
1,500	Brighton	20	20	104	34	Sept.
750	Do. New	20	18	9	34	Nov.
2,471	Brighton, General	20	20	104	41	Nov.
363	Carlisle	25	—	—	—	—
4,900	Continental Consoliat.	75	622	163	64	July
240	Canterbury	50	50	35	8	Dec.
790	Cardiff	50	50	42	8	Dec.
300	Cheltenham	50	50	73	8	Oct.
1,000	City of London	100	100	134	10	Sept.
1,000	Do. New	100	100	114	6	Dec.

200 Coventry	50	50	..
200 Derby	50	50	..

180	Dover	50	50	—	—	—
600	Dustley	20	20	17	5	—
4,500	Edinburgh Coal Gas	25	25	—	—	—
	Edinburgh and Alloa		14	—	—	—
240	Exeter	50	50	—	—	—
4,000	Equitable	50	50	26	3	June
10,000	European	20	15	—	—	Aug.
4,450	Glasgow	25	25	54	10	—
20,000	Greenwich Railw. Gas		1	—	—	—
10,000	Imperial	50	50	51	5	—
85,000	Do. Bonds	100	100	—	4	—
1,200	Ipswich		10	—	—	—

2,350 Independent.....	30	30	50
240 Leicester.....	50	50	..

750	Leith Coal Gas	20	20	—	—
500	Liverpool	242	242	60	2
	Do. N. Gas and Coke	100	100	97	—
	Do. (New Do.)	—	60	—	—
200	Maidstone	50	50	100	10
9,000	Phœnix	50	39	291	4
579	Portsea	—	55	—	—
504	Poplar	50	50	—	—
1,000	Ratcliff	100	80	013	4
480	Rochdale	—	15	—	—

1,600	Sheffield	..	164	..
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1,000 Slrewsbury	10
120 Warrington	50	50
8,200 United General	50	45	36	5 Jan.
240 Warwick	50	50	50	5 Jan.
400 Wakefield	25	25	25	14 Jan.
750 Warrington	20	20	..	1 Dec.
12,000 Westnminster Chartered	50	50	50	5 Oct.
6,000 Brito. New	50	..	17	12 Aug.
200 Werthing	50	50	..	5 Aug.
800 Wymouth .....	..	..	..	..

	100.	100.	£s.	d.	July
100,000 Slrewsbury	10	..	..	..	..
120 Warrington	50	50	..	..	..
8,200 United General	50	45	36	5	Jan.
240 Warwick	50	50	50	5	Jan.
400 Wakefield	25	25	25	14	Jan.
750 Warrington	20	20	..	1	Dec.
12,000 Westnminster Chartered	50	50	50	5	Oct.
6,000 Brito. New	50	..	17	12	Aug.
200 Werthing	50	50	..	5	Aug.
800 Wymouth .....	..	..	..	..	..

Stock.....	100	100	107
1,028 East County	100	100	10

2,535,319 5s. 1 London. Stk	100	..	644	22	Dec.
Ditto Bonds ....	..	..	106	4	..
2,209 Bristol	147	147	74	219	Dec.
68,324 Ditto Notes .....	..	..	113	5	Nov.
570 Folkestone Harbour	30	30	..	..	..
15,000 Ditto Bonds ..	..	..	1	5	..
11,000 Grand Collier Docks	..	..	1	..	..
352,752 St. Katherine. Stock	100	100	167	3	Jan.
2,000,000 Ditto Bonds ..	..	..	1014	48	Oct.
200,000 Do. Bonds for year.	..	..	394	4	Oct.
2,549 Deptford Pier	20	3	11	..	..
Southampton	30	5	22	..	..

BRIDGES.					
1,500 Hammersmith	50	50	22	1s	Jan
7,231 Southwark w. new sub.	63	98	22	..	..
1,700 Do. New of 74 per cent.	50	50	14	13	Dec.
5,458 Vauxhall	701	704	254	19	Dec.
5,000 Waterloo	100	169	3	..	..
5,000 Do. old Annuities of 8s.	60	60	21	22s	Feb.

100

WATER WORKS.						
900	Birmingham	25	25	20	10	—
121	Colchester	160	100			
433	East London	100	100	166	6	Jan.
000	Glasgow	50	50			
536	Grand Junction	463	411	672	21	Jan.
000	Edinburgh Joint Stock	25	25			
000	Kent	100	100	454	2	Jan.
372	Liverpool Bottle	220	220	326	10	Jan.
500	New River Land Bridge					
	Water Annuities			62	24	Oct.
498	Marches & Salford	100	30	594	24	Mar.
800	Porten Island	50	50			
100	Portsmouth & Farington	50	50	21	1	—
000	Ramsgate	10	8	10		
000	Vauxhall, late So. Lond.	100	100	104	45	Oct.
200	West Middlesex	634	634	60	45	Dec.
368	York Building Co. L. F.	160	100	35	17	Oct.

ROADS.						
333	Archw. and Kent In.	80	30		1	1 & 7
300	Earling	100	100	224	12	1 & 7
000	Commercial	100	109	75	5	1 & 7
2,660	Do. East India Dock Br.	100	100	3	3	1 & 7
422	Great Dover Str.		76		13	1 & 7

d. Stock 100	100	.
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LITERARY INSTITUTIONS.					
400	Adeleide Gal. of Science	50
600	London, w. Bronze Tick.	75	75	17	..
500	London University	100	100	8	..
700	Russell	25	25	7	..
1000	King's College	100	100	100	..

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1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26